CHEMICAL MARKETS

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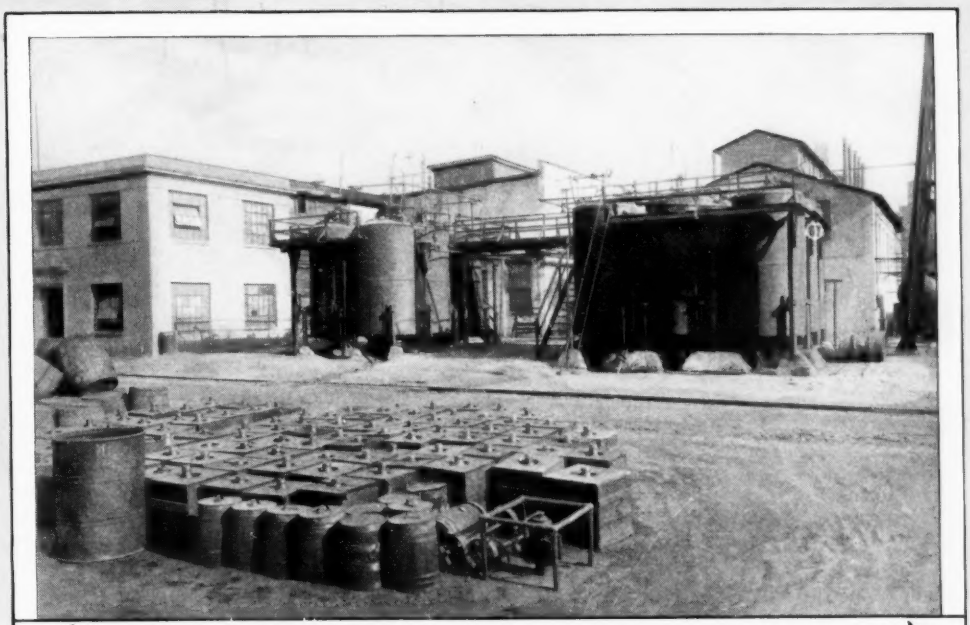

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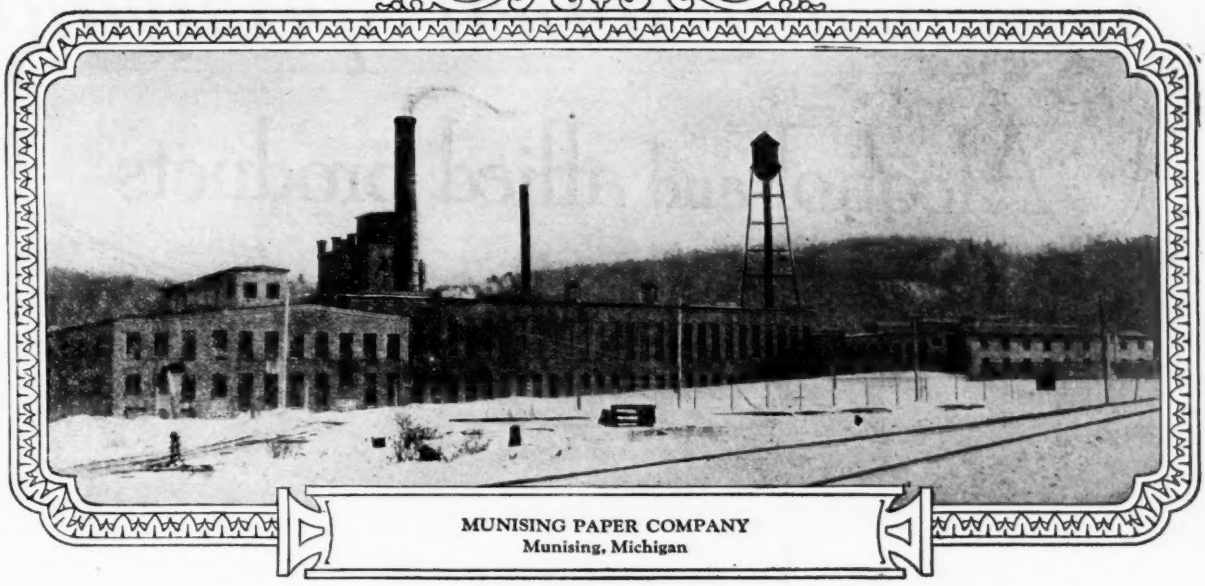

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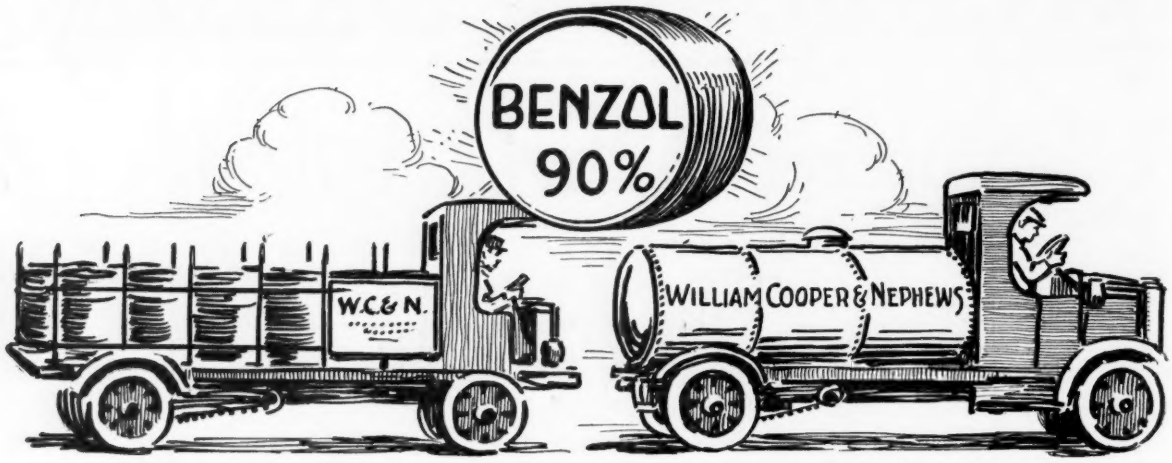

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CHEMICAL MARKETS

VOL XX NEW YORK, JANUARY 13, 1927 NO. 2

Dollars and Chemicals

FROM the housetops the leather lunged heralds of modern science shout every new development in Chemistry. Down in the bustling marketplace, makers, sellers, buyers are so busy making practical these chemical discoveries for the use of mankind that they appreciate only with difficulty the changes taking place in every branch of the chemical business. Yet, though we hear less of them than of scientific developments, we are in the thick of revolutionary changes in the distribution of all chemical products.

MANY of these spring from the advance of science. New products open new markets and replace old products in their traditional uses. Improved plant technique changes ratio of cost, often vitally affecting competition. Research widens consuming fields. But beneath these advances and adjustments there lie a whole series of very fundamental changes in the business practice of the industry. War over-production has left a herd of yet unsolved problems that intensify competition. Big business has entered the chemical field. High finance is now to be reckoned with as carefully as the chemist must study temperature and pressure. Consolidations take place every month. Large production or multiplicity of products force the bigger companies to organize their own sales forces. Tariff changes, fluctuating foreign currencies, huge chemical trusts abroad, all disturb both our imports and our exports. Competition has ground down the margin of profit, forced speculators out of the chemical market, stabilized prices. Business conditions are as different from what they were ten years ago as carbon black and oxalic acid. Nor have we returned to pre-war conditions. We are working today upon an entirely new basis: dollars and chemicals have assumed new relationships.

IT is the business of CHEMICAL MARKETS to study these new conditions of the chemical business; to interpret them for its readers; to analyse their meaning and forejudge, if possible, the effects. These basic changes in our field lead us to adapt our service better to the need of the time. To do so we have revised the schedule of our publication, and henceforth, for three weeks during each month we shall publish a News Edition and on the second Thursday of every month a business magazine. Time is the greatest element of value in news and by omitting all editorial comment, all feature articles, all price lists, we shall cut forty-eight hours out of the time from when our News Edition leaves the editors till it is delivered in the printed page to the reader. The monthly reviews will present a seasoned, careful analysis of the business problems of chemistry. We recognize fully the great need for a thoroughly authoritative chemical business magazine, a publication of force, of true character, of real standing, one truly representative of the vast business interests of "the master key industry."

INDUSTRIAL ALCOHOL

Alcohol denaturants are in the foremost news of the day. Even our most staid dailies have given them the most prominent news position for days running. Indeed, the denaturing of alcohol, which heretofore concerned only manufacturers and consumers of alcohol, manufacturers of denaturants and the Treasury Department, is being brought into Congress as the football of prohibitionists and politicians. The struggle between the "Wets" and the "Drys" of the Country has found a new battlefield, namely, whether or not denaturants should be poisonous.

Alcohol is denatured for one reason only, and that is to prevent its use as a beverage while allowing its free movement into industrial channels without permit. If only a poisonous denaturant will absolutely prevent its use as a beverage, and if poisonous denaturants are barred from use, then the logical step to follow will be the placing of all alcohol under permit to its ultimate consumption. This would be a body blow to the alcohol producers. It would result in chaos in many of our biggest industries. The anti-freeze market, which is now the largest outlet for denatured alcohol, would be virtually closed, as it would be utterly impossible to place all the automobile supply houses and gasoline filling stations under bond for an item that means so little to the sales of each one of them. Other industrial consumers of alcohol would eagerly search for substitutes in order to escape the undesirable Government supervision.

Whether prohibition is right or wrong is beside the point, the "wets" have found a new device for focusing the attention of the public on the supposed iniquities of prohibition, and in so doing are broadcasting the fact that methanol is the most satisfactory denaturant from the Government's viewpoint that has yet been found. But the ones most vitally concerned in the matter of completely denatured alcohol will be an ignored minority, if Congress attempts to decide the matter in its present state of hysteria.

THE FUTURE IN CHEMICALS

Increased activity in the chemical industry during the new year is almost a foregone conclusion. While most industrial leaders forecast better business conditions for the coming year, there is here and there, a hint of caution in regard to expecting too much of the future. The year that has just closed has been good to business, and it seems that all industries expect each succeeding year to treat them better.

Whether or not business slumps during the coming year, the chemical industry should not suffer any great setback. As time goes on chemicals are becoming an important part of a greater variety of industrial activities. Rayon has so greatly increased the consumption of the alkalies that the unit cost of caustic is materially lowered due to the fact that plants are operating closer to capacity. Lacquers have done wonders for acetic acid manufacturers. Flotation of ores and gasoline anti-knocks are but two more examples of the increasing recognition of the fact that chemicals are the best way to increase efficiency after mechanical improvements have been exhausted.

CHEMICAL RESEARCH

That many problems requiring intensive research for their solution still confront the chemical industry was recently pointed out by Dr. Norris. Control of the orientation of the nitrate group in the nitration of toluene is only one of the many examples cited. The price history of ortho-toluidine and para-toluidine presents the practical results of the lack of such control. A few years back para-toluidine was in demand and ortho-toluidine went begging. Later demand outside the chemical industry itself arose for the ortho-toluidine which had been a drug on the market. The price of ortho-toluidine advanced sharply with the demand due to the fact that makers were obtaining an excess of the para-salt.. Makers were greatly concerned by large excesses of para-toluidine as that product sold at a much higher price than the ortho-salt. Now the price positions of the two salts are in a fair way to become reversed, ortho-toluidine is headed to sell at a price above para-toluidine. And who knows when the demand for para-toluidine will increase through new outlets and reverse the positions all over again?

Such problems in manufacturing and marketing of chemicals may make the business more intriguing to some, but to the large majority it spells uncertainty, and to the ultimate consumer it spells higher prices caused by manufacturers being obliged to protect themselves against such contingencies. To be able to manufacture the article desired without obtaining undesirable by-products should be the aim of the chemical manufacturer.

A memorial tablet to Otto Unvordorben, the discoverer of aniline oil, has been placed on his house in Dahme, Germany, and the street opposite has been named Unvordorbengasse. Germany profited well by this discovery but the tablet seems just a little late.

[*Ten Years Ago*]

(From "Drug & Chemical Markets," Jan. 10, 1917)

Advance of 50c a pound in Bengal indigo last week was the first price movement in this commodity since last Fall.

Agreement to limit the output of quebracho extract in Argentina is reported by Consul William Dawson, Jr., of Rosario. Object of the agreement, says "La Nacion," is to reduce the output to meet the world demand, estimated at 130,000 tons.

Manufacturers of acetic acid are at capacity on orders, and prices are 4½c@5c a pound for 28 per cent, 9c@10c for 56 per cent, 11¼c@11½c for 70 per cent, 13c@14c for 80 per cent, glacial 20c@25c.

Sulfuric acid prices advanced for brimstone 66 degree, which is quoted at $30 a ton, 60 degree $20@$22 per ton.

The Chemical Cinderella

Industrial alcohol, which from the first owed its very existence to the law of the land, is treated by our harassed lawmakers like an unwelcome stepchild. Scolded and disciplined, it nevertheless, commands a prominent place in practically every industry.

A GE-OLD, worldwide intoxicant: the most widely used solvent in modern industry—either definition exactly fits alcohol.

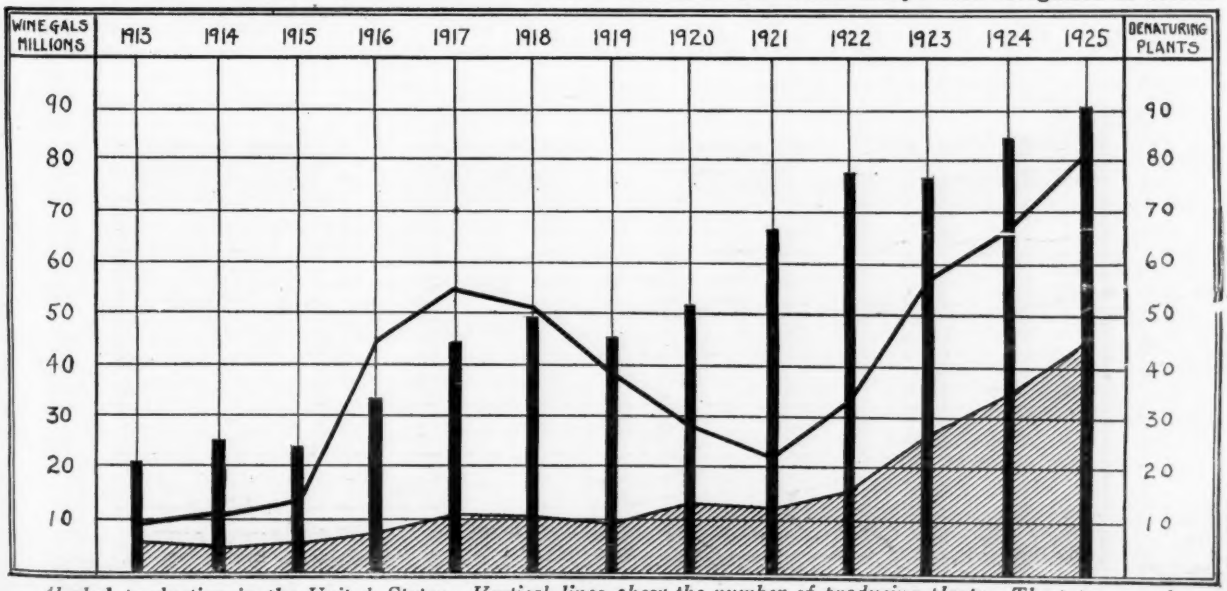
Because of its dual characteristics alcohol has been a pet subject for legislation since the time of the Pharoahs, those astute Egyptians having discovered that according to its first meaning it was a capital source of royal revenue. In these United States, similar excise levies kept alcohol from industrial uses till in 1907 when Congress passed the first denaturing law, literally creating tax-free industrial alcohol. During the War, Congress adopted the Eighteenth Amendment, which in effect, declares that the original definition is null and void.

The Government made industrial alcohol possible. In twenty years it has become an absolutely essential raw material in a score of basic industries and added millions to our productive wealth. Yet the production of this necessary chemical has of necessity been built upon a crazy patchquilt foundation of twisted legal terms, tax levies, and prohibition regulations. The very growth of this industry, in spite of all its uncertainties and entanglements, in the best proof of the true importance of this solvent in the world of modern industry. The sooner that the Government, in all its branches, recognizes this plain fact; and separates sharply its considerations of Prohibition politics from the industrial needs of the country the better for all concerned.

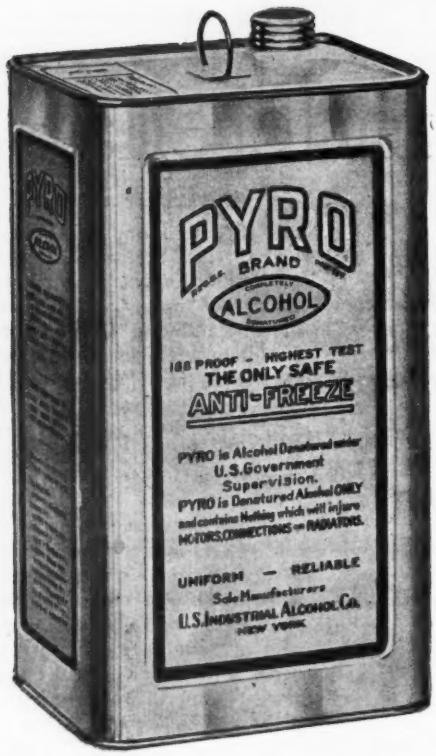
Yet just at this time, denatured alcohol is more deeply involved than ever in the maze of dry enforcement. Stricter control of the specially denatured formulae, has turned the "cooker" to completely denatured alcohol for his illegitimate source of supply, and although our "C.D." formulas contain less methanol than in pre-prohibition days, and much less than the "methylated spirits" sold in England and Germany tax-free for industrial purposes, the spectacular issue of "poisoned alcohol" has been dragged before Congress. From out the muddle of prejudice comes a flood of talk and wild speculation. Reports from Washington say today that all formulae will contain more methanol! Yesterday it was rumored that the use of this denaturant will be abolished. To-morrow, doubtless, we shall hear that all alcohol is to be sold through none but bonded firms and under license!

For it is in the sale of alcohol that legal aspects play greatest havoc. No other chemical product has labored under so many handicaps in developing a sound merchandizing plan, and yet, curiously enough, no other group of chemical producers are more intelligently attacking their distribution problems than are the manufacturers of industrial alcohol.

Quite aside from the legal harassing to which the alcohol industry has been subjected, it has passed through a whole series of perfectly natural industrial developments, each of which has forced new distribution methods in order properly to supply new industrial demands. Before tax-free alcohol was available, the high price (due to the liquor excise levy) virtually restricted alcohol's industrial uses to the medicinal and the perfumery fields. Then the demand was easily supplied as a by-product of the whisky distilleries. But tax-free alcohol made economically available the chemical solvent that had always been recognized as second



Alcohol production in the United States. Vertical lines show the number of producing plants. The top curve shows the total production of denatured alcohol. The shaded area shows the production of completely denatured alcohol.



in usefulness only to water for industrial purposes.

The paint and varnish industries were the first and most direct beneficiaries; but a close second is every branch of the chemical industry, and it is a sober fact that our whole great synthetic organic industry, built up during the war, was made possible only because we had available sufficient stocks of cheap solvent alcohol. To alcohol we owe then, not only the tremendous added wealth of our dyestuffs and newer medicinal chemical industries; but also the vastly strengthened position which these have given to our national chemical resources.

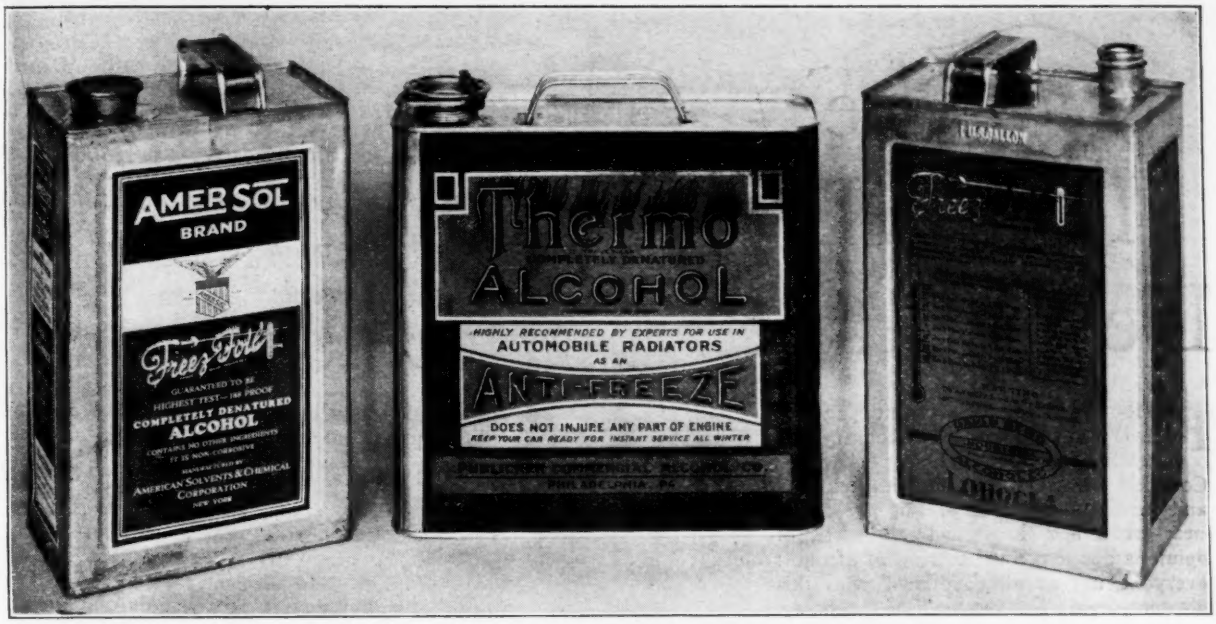
Ten years ago, alcohol first began to come into extensive use during the cold months as an anti-freeze in automobile radiators. This use has grown steadily till today this anti-freeze market represents the greatest single outlet for alcohol in the United States. Alcohol has thus made winter use of automobiles a reality, and has not only been a real factor in extending the use of the motor car; but has probably shoved forward by ten years that much talked-of automobile saturation point.

This use by the general public has of necessity meant the development of merchandizing through retail distributors. Logically this was perfected through automobile channels, the wholesalers, gas stations, and garages. But through these channels, so strange and unusual ones for chemical manufacturers to use, has come the impetus for the gallon can package and the co-operative advertising campaign, the two latest advancements in alcohol merchandizing. Both have grown naturally enough out of the branding of anti-freeze alcohol sold to the public, for the protection of the buyer and to the sales advantage of the individual manufacturers.

In order that the branded alcohol may accomplish these desirable results it must be identified by the ultimate consumer, and it must be put into his hands in a tamper-proof container, since, like lubricating oil and gasoline, alcohol tempts dilution and substitution. Taking a leaf from the lubricating oil sales books, the alcohol manufacturers have begun packing their product in gallon tin cans, usually stoppered with some sealing device, and lithographed or printed with the distinctive trade name and trade mark of the maker.

Last summer, when the Industrial Alcohol Manufacturers Association was organized, the members agreed to adopt for anti-freeze alcohol the trade general name of "FreezFoil," and to use this name in connection with their own trade mark on the labels, containers, and in their individual advertising campaigns. How cleverly this common effort is being adapted to individual means and needs is illustrated in the reproductions shown of the containers of several of the well known companies.

But the associated manufacturers did not stop at the adoption of a general name, they voted money for an advertising campaign which would familiarize the public with the word "FreezFoil" and at the same time tell the story of the peculiar advantages of alcohol as a freeze preventative in automobile radiators. Finally, the manufacturers have individually been carrying on their own advertising campaigns. In a recent issue of CHEMICAL MARKETS the plan of the co-operative campaign has recently been set forth in detail; while in "Printer's Ink," the campaign for Pyro, the brand name of a manufacturer who has not as yet



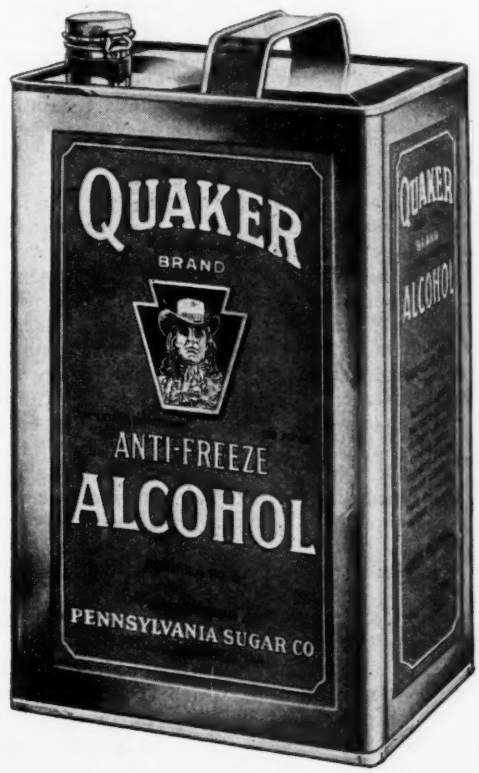
joined in the co-operative effort, has been described. The latter campaign was worked out in close consultation with the Weather Bureau, and was scheduled to run in daily newspapers, only on telegraphic instructions, in order that the insertions might always be made just before a cold snap.

Out in the middle west, there has been a marked tendency on the part of the larger gasoline and oil distributors, operating many road-side gas stations, to go in strongly for the merchandizing of anti-freeze alcohol. This has at once simplified the selling problems of the alcohol producer and given the public the advantage of the lower costs of such more direct distribution. This sales movement is working eastwards, and if it were allowable to distribute completely denatured alcohol through these channels by means of tank wagon delivery it would accelerate sales of this character and in lower prices prove a boon to the ten million automobilists who are at present using alcohol for anti-freeze purposes.

The tremendous gallonage—some forty million gallons estimated for 1927—of alcohol used by the motoring public, which is distributed through local retail outlets, is one of the grave concerns of the alcohol manufacturer whenever the Government tampers with prohibition regulations which affect in any way the sales processes. This is a market that cannot be covered with license and bonding regulations, for the smaller dealers would be forced out, greatly inconveniencing the general public and at the same time playing into the hands of large distributors.

Recognition of these plain commercial facts and the sound appreciation of the service to American industry which alcohol performs daily has inspired the statements made to the daily press during the past two weeks by scores of leading chemists and chemical manufacturers to the general effect that industrial alcohol, denatured now as always so as to render it quite unfit for beverage purposes, is not a proper football for prohibition politics. They point out that the ideal denaturant, from the chemical point of view, is methanol, and that this is the denaturant used here and abroad. It mixes perfectly, it is almost impossible to remove, it does not affect the chemical properties of ethyl alcohol. If it has disadvantages, these lie in the fact that it is materially higher in price than tax-free alcohol, and hence tends to increase the price of this solvent; and that while being toxic it does not give very plain warning of its presence by smell or taste.

The alcohol producers themselves recognize these disadvantages—none of which, it should be noted are concerned directly with the red herring of poisoned bootleg liquor which is being so assiduously dragged across the legitimate industrial alcohol trail these days—and as a group, the alcohol producers are working to help solve the problem of a better denaturant. Their association has not only founded an industrial fellowship to study this problem at the Mellon Institute; but there is not a single firm among them, which is not doing much experimental, research work in their own chemical laboratories.



The IDEAL Denaturant

An authorized interview in which Dr. Lewis H. Marks, of the Alcohol Manufacturer's Association discusses the research by his organization and adds telling facts on the newer values of chemical investigations of industrial problems.

FOR two weeks the front page of every newspaper in the country had flashed news of alcohol poisonings; Congress had been flooded with petitions and memorials; scores of our great and near-great had expressed all sorts of opinions about the denaturing of alcohol; everyone not at all concerned with this chemico-legal problem had had his say, and so it seemed quite fitting to call upon one of the few men in the country really close to the very heart of this burning question to discover his thoughts and reactions.

Dr. Marks was discovered quite unexcited in the midst of all the popular excitement: keenly interested, gravely concerned; but as calm as a hydrometer.

"It is a serious problem," he said, graciously indicating a chair to his visitor, "but it is unfortunate that it is being complicated. It was tangled enough before it became a popular issue. Legal rights and moral values are always a highly inflammable combination, and it would serve no useful purpose were I to rake over the ashes of controversy by giving the readers of CHEMICAL MARKETS my personal opinion. In a business sense none of the alcohol producers have any opinion in this matter. The purpose of the denaturing law is to render alcohol unfit for beverage purposes, and it is our simple duty to obey such denaturing regulations as the Treasury Department issues.

Anticipating the Problem

"But as a matter of fact," he went on, "we have naturally anticipated something of this new angle to our many problems. We understand plainly that from a chemical point of view methanol is at present the most difficult denaturant to remove; but we do not feel that it is by any means the last word in the ideal denaturant. It was for this very reason that almost the very first official act of this Association was to vote a fund for a research scholarship at Mellon Institute, and we have charged our Fellow there with the especial task of finding an ideal denaturant for alcohol."

When asked for his definition of an ideal denaturant Dr. Marks leaned back in his chair and for several seconds his eye thoughtfully studied the mahogany bookcases across his office.

"The ideal denaturant would have to meet several requirements," he said at length. "First, of course, it should be impossible to separate it, by any physical or chemical means, from ethyl alcohol. That is the paramount consideration. Next, it must not alter the chemical characteristics of alcohol, which is put to so many essential chemical uses in industry today that it has become an absolute essential. For the benefit of those who apparently have acquired a taste for denatured alcohol as a beverage I would like a denaturant that gave a fair warning of itself by unpleasant odor and taste.

"Furthermore," he continued, ticking off these specifications on his fingers, "the ideal denaturant, without being toxic, might very advantageously act promptly and efficiently as an emetic.

"You see, this is not going to be an easy product to discover, since it must meet the requirements of the law; it must not interfere with the legitimate chemical uses of alcohol; it must warn the bootlegger's customer, and it must satisfy the demands of the Prohibitionists: all in all, a tolerable burden to put on the shoulders of a research chemist.

"Our work may not be successful, yet I cannot but believe that this is a soluble problem. It may take time; but we have, in the meantime, the satisfaction of knowing that all our research work is adding to the knowledge of denaturants, bringing us closer and closer to the ideal denaturant.

"That, by the way, is a most interesting, distinguishing characteristic of all research work. It is an aspect of research that too few of our business executives appreciate, and I have never heard it more neatly summed up than by a sentence I ran across the other evening reading "The Arcturus Adventure."

No Negative Failures

"Beebe had just told of his disappointment in failing to find vast fields of seaweed, teeming with marine life, in the midst of the Sargasso Sea, and he added: "A negative result such as this would be accounted a failure in business or hopeless in religion. To science it was of concrete value and added a wholly new interest to the entire problem."

"This positive value of negative results in research is quite as true as the newer chemical research which is applying itself to sales problems as to the familiar form which has so long been employed to assist production. The research work done in the bakery and laundry and glass industries; the study that the stearic acid manufacturers are making of new uses for their product; the constant, painstaking service research which many of our great chemical firms are constantly rendering to their customers: all of these are building up a wonderful background of commercial chemical knowledge of inestimable value. It is a great fertile field the outer edges of which have only just begun to be faintly scratched.

Complicated Commercial Reactions

"To return, for a moment, to our own alcohol denaturing studies, we are working on a problem of almost universal chemical interest. Dyes, pharmaceuticals, all synthetics, paints and varnishes, lacquers, anti-knocks

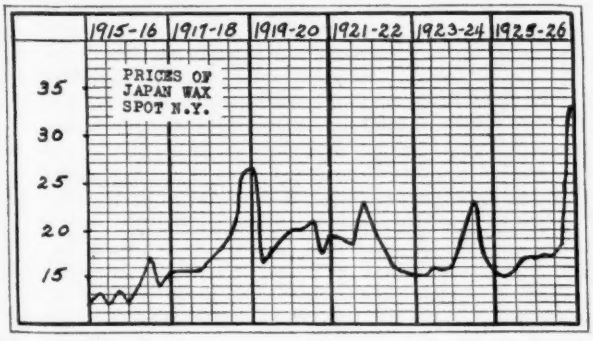
and anti-freeze are all dependent upon denatured alcohol, to say nothing of the explosives which touch closely the problem of national defense.

An ideal denaturant even approximating the specifications I have outlined is a prime chemical necessity for this country. Incidentally there awaits a great reward for the chemist who can discover it and the manufacturer who can supply it at a low price in sufficient quantities to assure its official adoption."

Japan and Carnauba Waxes High

The present tight situation in Japan and carnauba waxes presents an interesting topic for comment at this time. Although both reach the same consuming outlets in some cases, the movement of one is certainly not contingent on the other. Over a span of years the price movements of both have been confined to comparatively narrow limits, though Japan wax is considered fairly speculative in some quarters. However, for the past ten years neither has shown anything to equalize the meteoric rise of the closing months of last year.

Japan wax presents the more difficult position to analyze for opinions differ among the factors as to the exact value of spot parcels. At the moment a price range of from 30c to 35c per pound is heard on spot and offers are scarce even at these inflated levels. A wide range exists between these figures and the openly quoted prices for February arrival and February-March shipment from Japan, which are named at 23c per pound and 19c per pound respectively. At no time during the advance of the spot market did the primary market keep pace with the position here. Prices from Japan



did show some increase, but there has not been an actual shortage of wax there during the period under review, and at the moment stocks in Japan are understood to be normal. In justification of the upward movement on this market there was, and still is, a shortage of wax to be offered on the open market. With the first advance in price the buyers realized that the market was due for an advance and apparently made attempts to cover. This created a firmer market and boosted the price again. However, the opinion prevails that to send the market soaring to its present level there was some manipulation of the limited stocks at the sellers' disposal. With lower prices on arrivals and futures the market seems due for a return to the levels of last summer.

The advance in carnauba wax is attributed to conditions entirely foreign to those governing Japan wax.

(Continued on page 90)

Who's Who in the Chemical Industry

Edwin Ormond Bastow, production mgr., Dow Chemical Co., Midland, Mich. Born: Rockport, O., Nov. 13, 1879. Educat.: Grad. Case Sch. of Applied Science, Cleveland, O., 1900. Mar.: Florence Katherine Schade, of Cleveland, July 21, 1903; children: 5 sons, 1 daughter. Bus.: With Dow Chemical Co. since 1900, prod. mgr. and dir. research and plant development since 1918. Patentee of electrolytic cells and apparatus and methods for oil extraction; also processes for mfr. lead arsenate, magnesium chloride and other salts, phenol, benzoic acid, etc. Dir. Chemical State Savings Bank, Midland. Trustee, Midland Community Center. Mem.: Am. Chem. Soc., Sigma Xi, Tau Beta Phi, Mason, K. P. Club: Rotary.

Benjamin T. Brooks, chem. & cons. engr., Chemists' Club, New York. Born: Columbus, O., Dec. 29, 1885. Educat.: A.B., Ohio State U., 1906; Ph.D., Gottingen U., 1912. Mar.: Sarah Osgood, of Springfield, Mass., 1909; children: 3 sons, 1 daughter. Bus.: Asst. chemist, Bur. of Standards, 1906-07; research chemist, Bur. of Science, P.I., 1907-11; fellow Mellon Inst., Pittsburgh, 1912-17; prof. chem. engring., U. of Pittsburgh, 1913-17; chief chemist, Commercial Research Co.. of N. Y., 1917-18; cons. practice, 1918-19; chem. engr., Mathieson Alkali Works, 1919-24; cons. chem. since 1924. Maj. Chem. Warfare Reserve, U.S.A. Mem.: Am. Chem. Soc. (chmn. N. Y. sect.); Am. Inst. Chem. Engrs.; Soc. Chem. Industry (London); Inst. Petrol. Technology, London; fellow Chem. So., London. Clubs: Chemists' (New York); Chem. Industries Club, London. Author. Non-Benzenoid Hydrocarbons, 1922.

Robert F. Carr, pres. Dearborn Chemical Co., Chicago. Born: Argenta, Ill., Nov. 21, 1871. Educat.: B.S., U. of Ill., 1893. Mar.: Louise B. Smiley, of Chicago, 1906 (died Sept. 7, 1925); children: 1 son, 2 daughters. Bus.: With Dearborn Chem. Co. since 1894, pres. since 1907; dir. Continental & Commercial Nat. Bank, Sheffield Car & Equipment Co., Kansas City, Mo. Served as maj. Gen. Staff, U.S.A., Purchase, Storage and Traffic Div. under Gen. Goethals, July 1918-Jan. 1, 1919. Pres. Home for Destitute Crippled Children, Chicago; trustee U. of Ill., term 1915-21, pres. of bd., 1920-21 (donor of fellowship in chemistry); chmn. U. of Ill. Memorial Stadium Com. ($1,850,000 stadium completed, Oct., 1924, funds all raised among alumni, faculty and students; dedicated to 180 U. of Ill. men who lost their lives in World War). Mem.: Am. Chem. Co.; Art Inst., Chicago (life); Chicago Hist. Soc.; Field Mus. of Chicago (life); Kappa Sigma (life trustee endowment fund). Clubs: University (pres.), Union League, Industrial (ex-pres.), Chicago Athletic Assn., Old Elm, Shoreacres, Racquet, Iroquois, Casino, Chicago Riding (Chicago); Crane Lake Hunting (Ill.); Congressional Country (Washington, D. C.); Midwick Country (Los Angeles, Calif.).

Irenee Du Pont, chairman of bd. of dir. and finance com., E. I. du Pont de Nemours & Co., Wilmington, Del. Born: Wilmington, Dec. 21, 1876. Educat.: B.S. in Chem. Engring., Mass. Inst. Tech., 1897, M.S., 1898. Mar.: Irene Sophie du Pont of Montchanin, Del., Feb. 1900; children: 8 daughters, 1 son. Bus.: Pres. E. I. du Pont de Nemours & Co., May 1, 1919-Mar. 15, 1926; v. p. Du Pont Securities Co., Christiana Securities Co., dir. E. I. du Pont de Nemours Powder Co., Am. Nitrogen Co., Ltd., Gen. Motors Corp., Fourth St. Nat. Bank (Phila.), Wilmington Trust Co.

Ammonia and Ammonium Chloride

Where will steadily increasing production of ammonia be consumed? With a war for control of the anhydrous market being waged ruthlessly, and potential production now far in excess of consumption as it now exists, new plants are coming into operation during the current year. Ammonium sulfate is at present produced in sufficient quantities, and a change in ammonia prices has an effect on sulfate prices only one-third as great as a change in sulfuric acid prices. A cheaper carrier might solve the problem, and what of the rapidly expanding market for ammonium chloride? Radio with its dry batteries is causing imports to expand phenomenally, and as some makers of ammonia are also producers of chlorine, this seems like an attractive outlet.

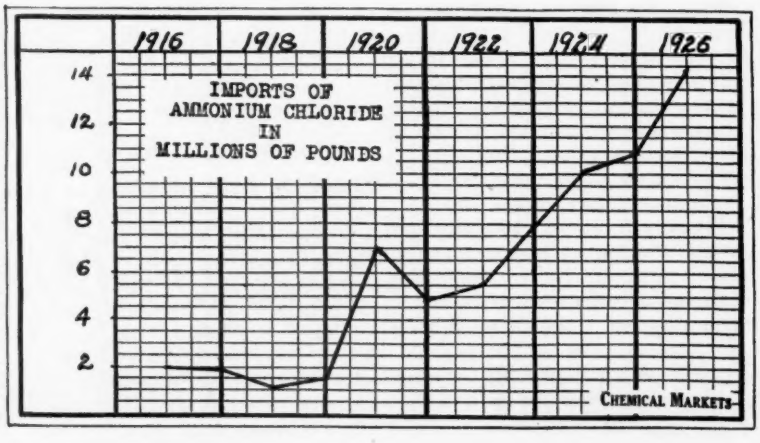
AMMONIA is one of the pressing marketing problems of the chemical industry today. A second price war, far more serious than the first one, has been in progress for the past month or more. One chemical manufacturer with hydrogen going to waste has completed an ammonia plant to utilize this by-product. Now with the plant erected, this manufacturer faces a dismal sales field. Other new plants are scheduled for completion during the coming year, and where the ammonia that they are designed to produce will go is the question seeking an answer.

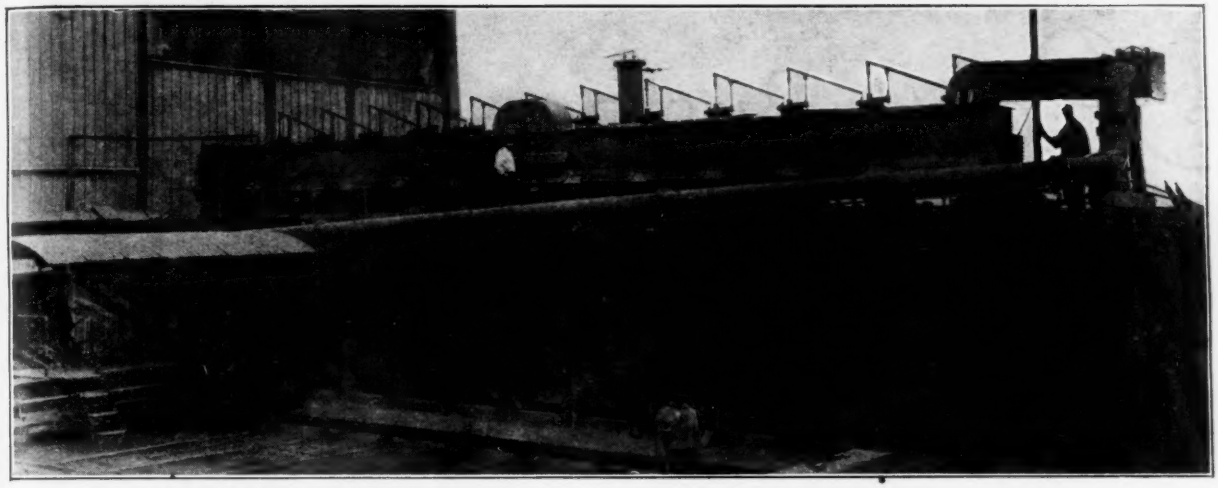
The present price war is apparently one for control of the anhydrous market. Marketing anhydrous ammonia is an expensive proposition involving as it does heavy investment in cylinders which are left in consumers' hands all over the country until they are emptied. Large sums of money are likely to be lost before the present price battle is won or lost.

Production of sulfate has apparently been large enough to satisfy requirements, and in fact a slight decline in price has been recorded in this material. With the ammonia part of ammonium sulfate representing by weight slightly more than one-fourth of the total, it can be seen that a change in the price of sulfuric acid would have an effect on the cost of ammonium sulfate almost three times as great as a change in the price of ammonia. Furthermore sulfur and sulfuric acid have advanced substantially in price during the past year and there is nothing to assure anyone that they will not advance again. The large cotton crop of the past year has had a dampening effect on the outlook in ammonium sulfate. Germany is producing synthetic sulfate and, according to reports, can lay it down in this country at prices sharply below the current market. At any rate, with ammonia in free supply and the price uncertain in a chaotic market, for ammonia manufacturers to attempt to utilize the sulfate market as an outlet for their supplies is like the tail wagging the dog. The closely held sulfur market will control the domestic sulfate situation no matter how cheap ammonia may be.

A search for a new carrier for ammonia to replace sulfuric acid has aroused considerable attention in Europe. Phosphoric acid has been suggested, as the resulting product, ammonium phosphate, would have much to recommend it in fertilizer circles. But phosphoric acid is not produced in this country by any method as cheap as the old sulfuric acid method. A new process is at work at the Anniston works, but the cost of the acid is dependent upon the cost of the electric power, and it is a question whether this acid could be produced cheaply enough to use as a fertilizer in combination with ammonia. Some work has also been done on the use of the sulfate radical contained in gypsum, but thus far nothing definite has been arrived at.

Radio has had a marked effect upon increasing the consumption of white ammonium chloride, or sal ammoniac, through the use of dry cells principally in the form of "B" and "C" batteries. A serious shortage of this material developed last Fall when radio owners suddenly put their radios in shape for the coming season after the Summer lull, moved almost to a man by the Dempsey-Tunney fight and the World's Series. The dealers' shelves were cleaned of batteries and the manufacturers suddenly came into the market for ammonium chloride. Domestic material was rapidly cleaned out, as was all imported material on spot and afloat. Now with a new year before them, one domestic factor points out that contracts closed for white ammonium chloride for the coming year are one-third in excess of both contract and spot business consummated during the year just closed. Certainly here is an outlet for ammonia that is promising.





First by-product coke oven plant built in the United States by Semet-Solvay Co. at Syracuse.

Reports are heard, and from factors in ammonium chloride too, that the so-called "B" battery eliminators will tend radically to reduce this rapidly expanding market to a minimum. But it must be realized that the radio even today is far from universal. Also many who have radios now and many that will obtain them in the future will not be able to stand the high initial cost of an eliminator. Furthermore an eliminator presupposes electric current, and even in this day there are many parts of the country that are not thus supplied. It is safe to say that at least 4,000,000 farm homes are not wired for current either from a central station or a local unit, and there is no doubt that these homes are a growing permanent market for radio equipment.

As to the manufacture of ammonium chloride, some of the ammonia producers are most fortunately equipped for its production. Producing ammonia to utilize hydrogen obtained as a by-product of electrolytic caustic, and obtaining chlorine in the same process, complete raw materials are available in their naked state. The hooking together of chlorine with hydrogen to form muriatic acid, and the making of ammonium chloride by the action of the acid on ammonia is the same process that has been in effect in the past.

Imports of White and Gray Ammonium Chloride

Year	Pounds	Dollars
1916	1,965,068	122,174
1917	1,834,088	178,274
1918	1,120,074	103,534
1919	2,015,318	246,075
1920	6,755,171	708,204
1921	4,638,275	271,398
1922	5,591,371	309,368
1923	8,074,536	433,572
1924	9,791,100	553,743
1925	10,894,560	460,344
1926	14,498,832*	570,888

*December Estimated.

Unfortunately domestic prices for ammonium chloride have long been considerably above prices for imported material despite the fact there is levied a duty of one and one-quarter cents per pound on the imported product. Imported material sells today at five and one-quarter cents per pound, duty paid, against a price of six cents per pound for carlots of domestic material. Of course domestic material generally obtains a premium in price due to greater certainty of shipments, and of quality. Production figures in this country are not obtainable as there is only one maker, but the import figures give some idea of the expansion of the trade.

Since 1921, the year following the industrial crash in the latter part of 1920, the imports of ammonium chloride have gained, and during the past year the amount of this gain has been enormous.

That ammonia will find an expanding market is a certainty. Research has seldom, if ever, failed in the past to utilize by-products of the chemical industry, and ammonia is the obvious way to dispose of by-product hydrogen. The coming year will doubtless bring interesting developments.

[*The Industry's Bookshelf*]

QUALITATIVE ANALYSIS OF THE COMMON METALS. By W. N. Masters, Professor of Chemistry, and Director of Department, North Texas State Teachers' College. Cloth bound, 107 pages. Published by Southern Publishing Co., Dallas, Texas.

A brief laboratory guide dealing exclusively with the analysis of metals with analytical operations adequately treated.

CHEMICAL SYNONYMS AND THEIR TRADE NAMES. By William Gardner, Works Chemist. Cloth bound, 355 pages. Published by D. Van Nostrand Co., New York.

Third edition of a dictionary and commercial handbook containing approximately 20,000 definitions and cross references. Gives all the names by which any product is known.

PRINCIPLES OF CHEMISTRY. By Joel H. Hildebrand, Ph. D., Professor of Chemistry in University of California. Cloth bound, 362 pages. Published by MacMillan Co., New York.

A second edition of a text-book by the same author to be used in general chemistry and qualitative analysis courses. The second edition has been thoroughly revised and also includes a chapter on molecular structure with particular reference to organic chemistry.

PRACTICAL COLLOID CHEMISTRY. By Wolfgang Ostwald, Professor of University of Leipzig, in collaboration with Dr. P. Wolski and Dr. A. Kuhn. Translated by I. Newton Kugelmass, Ph. D., Sc. D., and Theodore K. Cleveland, Ph. D. Cloth bound, 191 pages. Published by E. P. Dutton & Co., New York.

The fourth edition of a work that has kept abreast of the latest developments in colloidal chemistry. It gives a systematic presentation of the phenomena of colloid chemistry.

Polite Business Blackmail

By William H. Zinsser

President, William Zinsser & Co.

Here is a manufacturer who dares to tell all his customers both large and small that they must live up to their contracts when the market declines, just as he has to live up to them when the market advances. No exceptions are made

A QUESTION which I would like to discuss briefly in this article affects not only every industry which does busines on contracts but, it seems to me, contains in its working out, two problems which affect all industries. How we handled in our own business a problem which has at some time or other been before almost every manufacturer for solution may have in it some suggestions for the manufacturer who, having done business in good faith on a written contract, finds that his customer is trying to hedge. It may also coincide with the experiences of other men in other lines of industry who have been up against that most annoying form of business blackmail, the man who threatens that if you won't do something against the policy of your business and common business honesty, he will see that you never get any more business.

Our business, selling shellac, is done on a contract basis with large possibilities for sudden change in price. As in every business done on contract, written or oral, changed conditions naturally do not justify cancellation of contracts without mutual consent.

There is a curious thing about contracts, as any man in business on a commodity which fluctuates rapidly can testify. When a buyer has made a purchase for future delivery and the market on raw material goes up he will say that he was a mighty good buyer. If it falls, he is very likely to say to the salesman, "Why did you stick me?" When he buys right he bought it. When he buys wrong, it was the manufacturer who made him take it.

That, of course, is merely human nature. Ninety-five per cent of the people in our business and in all business, I think, want to play fair, no matter how they feel about it. What I say from now on applies only to that small minority who are cheap sports, the few in every industry who cause trouble by refusing to "come clean." They are few and getting fewer every year, but they still cause worry.

Consider this case. It can be duplicated in scores industries. The raw material, T. N. shellac, which we have been selling for seventy-five years, averaged fifteen cents a pound before the World War and went as high as $1.65 in the post-war period. Last year it dropped to forty cents, or lower than it had been in about ten years. This seemed a good time for the customer to buy alcohol. We sold it hard at that price, but suddenly and unexpectedly in 1926 the price dropped to a new low of twenty-three cents; lower than it had been in fifteen years.

During the sensational and unexpected drop of the shellac market in the first six months of 1926, many of our customers naturally found themselves with contracts on their hands for our products at a higher price. It speaks well for American business men as a whole that we can say that 95 per cent of our large list of manufacturer-customers lived up to the letter of their shellac contracts without a word of kick. They realized, like a bunch of good sportsmen, that they couldn't hope to guess right on every jump and drop of a speculative market.

But that small minority, the 5 per cent I am talking about, as is their custom, ignored completely the fact that we also buy on a speculative market and that when prices dropped we could not ignore our contracts. If the situation had been reversed they would have "raised Cain" if we had attempted to cancel our contracts with them. All through the market depression we urged shellac buyers to do as we were doing—buy down their high-price contract by purchasing further quantities at the lowest level. Many of our customers did this, while others, proving Mark Twain's statement that it takes all sorts of horses to make up a race, childishly and angrily blamed our salesmen as if the salesmen had, with malicious forethought, sold them a gold brick.

THEN came the attempts at contract-jumping. Some found that they could no longer use shellac. Others "suddenly discontinued" the manufacture of the particular product for which the shellac was originally intended, while still others made the sudden decision to change their finishing processes.

The dissension, small though it was, was not the most pleasant thing to face. No business likes to haggle with its customers. Yet in fairness to all the rest of our customers who were in exactly the same boat and were not trying to welch on their contracts, we could not release them from their obligations.

Our idea of a contract is a sound mutual document —not simply a scrap of paper which the seller must adhere to absolutely under all conditions, but one which the buyer can cancel at will.

Strangely enough, one or two of the protesting concerns were large companies and the temptation to permit them to cancel a small balance of three or five barrels rather than incur their ill-will and lose their future business was very strong. But fairness is not a quality that is just for the large and unjust for the small. In the name of good business, we could make no concession, aside from the fact that to have done so would have established a dangerous precedent which sooner or later would demoralize the entire contract system.

We were able to say, "William Zinsser & Company

(Continued on page 94)

Chemical Industries Chronology in 1926

JANUARY.

Sale of tetraethyl lead treated gasoline approved by the Government.

American Cyanamid Co. splits its common stock five shares for one.

A. Klipstem, of A. Klipstem Co., dies at 77 years.

FEBRUARY.

Du Pont common stock is put on $10 basis.

Pure benzene sells below the price of 90 per cent benzene for first time in history.

Tar Acid Refining Corp. is formed by Monsanto Chemical Works.

Alcohol manufacturers form Industrial Alcohol Manufacturers Association.

MARCH

President Coolidge asks for $185,000 to continue research work of Fixed Nitrogen Laboratory.

Survey of potash deposits in United States proposed in bill introduced in Senate.

Lamott Du Pont succeeds his brother, Irenee Du Pont, as chairman of executive committee of Du Pont Company.

Franz Roessler, chairman of board of Roessler & Hasslacher Chemical Co., dies.

APRIL.

Mathieson Alkali Works absorbs Fields Point Co.

Lacquer production for last half of 1925 up 27½ per cent.

Commercial Solvents successfully defends its process patent against Synthetic Products, Ltd.

Union Carbide Co., American Cyanamid Co. and Elon H. Hooker are among seven bidders for Muscle Shoals.

American Chemical Society meets at Tulsa, Okla.

American Solvents & Chemical Corp. formed by merger of Everitt Distilling Corp., Jefferson Distilling & Denaturing Co., Crescent Industrial Alcohol Co., Western Industries Co., and Witbeck Chemical Corp.

Commercial Solvents Corp. calls all outstanding indebtedness and converts all stock into one class of common.

Duty on coal tar dyes ruled not retroactive.

MAY

Crude sulfur advances sharply due to one maker being unable to recover from wells.

C. C. Speiden dies in England at 60 years.

Pennsylvania Salt Co. absorbs Eagle Lye Works.

Application made to prohibition unit to substitute aldehol for pyridine in denaturing alcohol.

JUNE

Henry Howard, of Grasselli Chemical Co., is elected president of Manufacturing Chemists Association.

Methanol producers claim loss in sale of products before Tariff Commission

Albert H. Hawes resigns from General Chemical Co.

JULY

Commercial Solvents Corp. erecting synthetic ammonia plant.

Cook & Swan merge with Frank L. Young Co.

Aniline oil price breaks after remaining unchanged since October, 1922.

Gamma acid suffers sharp decline.

President signs bills to $100,000 for each of the next four years to prospect for potash deposits.

Benzene unsettled during Summer months for first time since 1921.

Dr. Klein declares potash a monopoly.

Phenol market breaks 4c per pound.

London sodium nitrate conference reports severe competition from ammonium sulfate.

Methanol prices register two advances.

AUGUST.

Eastern Alcohol Corp., owned by Du Pont and Kentucky Alcohol Corp., starts production.

U. S. Industrial Alcohol Co. buys New Jersey Alcohol & Chemical Corp.

Institute of Politics discusses chemistry at Round Table at Williamstown.

SEPTEMBER.

Chilean nitrate plants closing.

H. V. Walker resigns as president of Miner-Edgar Co., his interest being bought by Philip Publicker.

Alcohol denaturing formulae 3 and 4 discontinued.

Air Reduction Co. common stock is placed on $5 basis.

Commercial Solvents B stock is placed on $8 basis.

Du Pont common stock is split into two shares for one.

Acetic acid prices seriously unsettled.

OCTOBER.

No dumping of phosphoric acid ruled by Treasury Department.

Charles L. Gagnebin and Herbert W. Read retire from dyestuff industry.

Methanol records another advance.

Chemical Foundation wins German patent suit in U. S. Supreme Court.

H. J. Baker and J. P. Carter win $87,000 verdict over Keystone Wood Products Co. for breach of contract involving the Brewster process for direct extraction of acetic acid.

New alcohol denaturing formula doubling the amount of methanol and substituting aldehol for pyridine is ordered by Treasury Department, effective January 1.

White ammonium chloride short with makers and importers.

U. S. Steel Corp. reports earnings from by-products of coke totalling $22,363,101.

Felix Wilckes, of Wilckes-Martin-Wilckes Co., dies suddenly at 59 years.

Dow Chemical Co. offers 15,000 shares of 7 per cent preferred stock at $100.

Largest cotton crop in history forecast and cottonseed oil prices break.

Imperial Chemical Industries formed in England with capital of $500,000,000 by merger of Brunner Mond & Co., British Dyestuffs Corp., Nobel Industries, United Alkali Co.

(Continued on page 110)

Flotation of Ores Now a Chemical Process

Flotation of ores is today properly called "Chemical Flotation." A new consuming outlet for a wide range of products has been opened up by chemical engineering doing what mechanical engineering could not do alone

FLOTATION of ores was first employed about 1910 when the basic patents on the process were issued. For some time the process was known as "oil flotation," but in a recent report by Thomas Varley of the Bureau of Mines it is stated that today the process might more properly be called "chemical flotation," as chemicals are becoming increasingly important in the work. All operators of flotation must at the present time operate under the basic patents issued in 1910. Many patents have been granted subsequently, but they are all subject to the basic patents These basic patents expire about the middle of next year, after which time the more recent patents will control the various processes, although flotation can then be carried on without further payment of royalties.

The economic advantages of flotation are best illustrated by the fact that before its discovery, an attempt to recover copper from an ore that contained less than one per cent of the metal was a losing proposition; while today the Utah Copper Co. alone concentrates 40,000 tons of ore per day that contains only one per cent of copper at the start of the operation. Ores containing complex mixtures of about 20 per cent of lead or 20 per cent of zinc and other metals, were worthless prior to the employment of flotation; now with flotation it is possible to concentrate these ores so that they contain 50 per cent of the desired metal, and are therefore adaptable to profitable smelting. Another advantage lies in reducing the cost of smelting. The average cost of smelting copper ore is somewhere in the neighborhood of $4.00 per ton. It makes no difference in the cost of smelting a ton of ore whether the ore contains 2 per cent or 5 per cent of copper. But if the ore contains 2½ per cent to start with, and can then be concentrated by flotation so that it contains 5 per cent when it goes to the smelter, it is necessary to smelt only half as much ore for the same amount of copper. In this event the operation of only half the number of reverberatory furnaces is necessary.

MODERN flotation is known as "differential" or "selective" flotation. This consists of floating only

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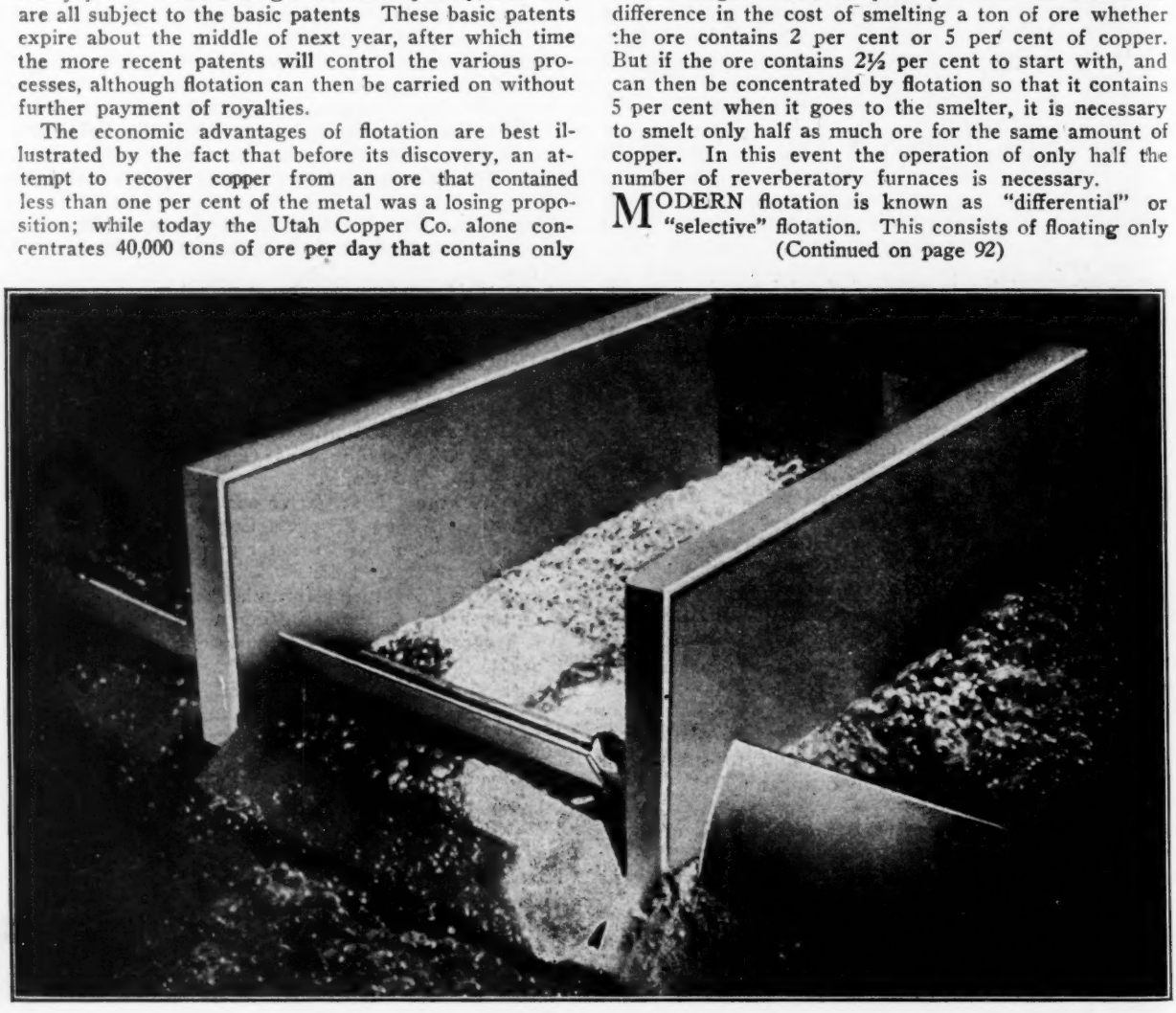


Froth discharge from spitz

Filtration of Water

By Churchill Hungerford
Of Hungerford & Terry

OUR earliest filters were enormous affairs requiring over 12,000 square feet of filtering surface for a daily capacity of 1,000,000 gallons, as opposed to the present-day filter of the same capacity having a filtering surface of 350 square feet. Moreover, the efficiency of the old type of filter depended upon the integrity of a layer of impurities retained upon the surface and upon the action of certain beneficient bacteria who acted as scavengers and bacteriacides. Unfortunately, the surface layer was often broken and the beneficent bacteria more often on the sick list than on the job. Finer particles of earthy matter were able to pass through these filters, so that often the filtered water, albeit perhaps safe enough for drinking, was unsightly and unsatisfactory for many industrial purposes. A further objection to old type filters was the necessity of frequent cleaning, which function was performed by men with shovels carefully removing the top half inch of sand and impurities and wheeling this very considerable aggregate in wheelbarrows to a washer, where it was washed and eventually returned to the filter bed.

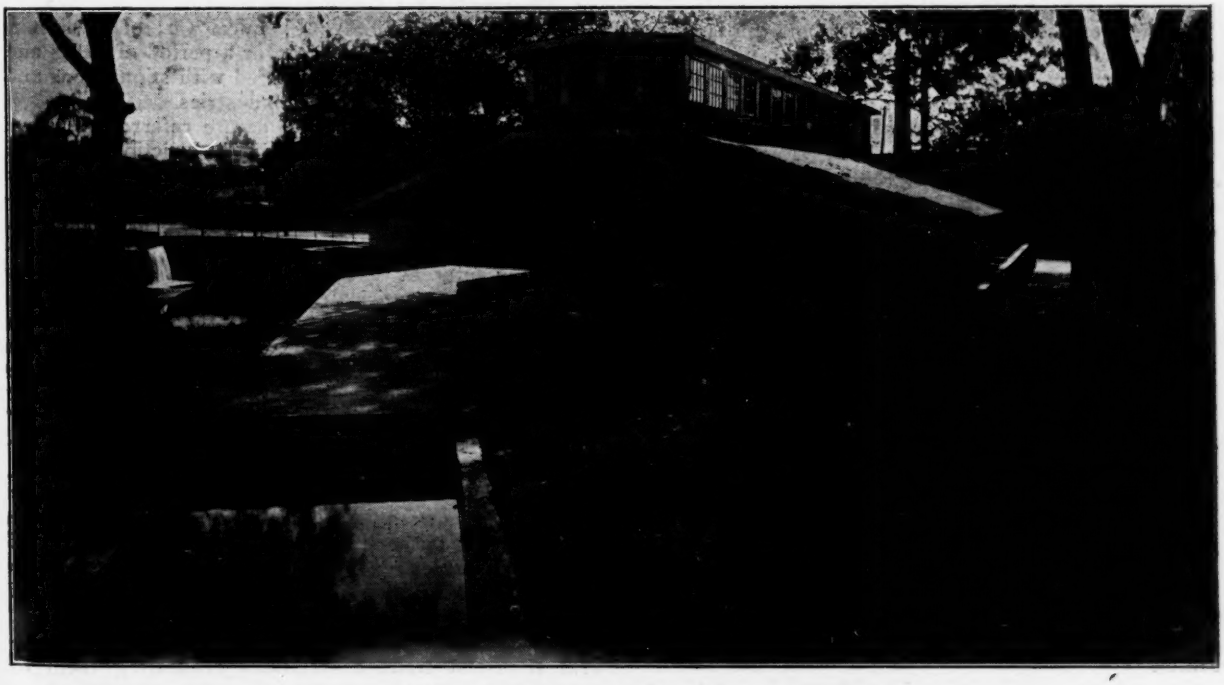
Present condensed and highly efficient filters deliver a bright, clear, sparkling water at the rate of two gallons per square foot per minute or better, are absolutely reliable in performance, remove all visible and invisible suspended matter including algae, bacteria, infusoria, and earthy particles as well as colloids, color, and many odors and gases that may be present. In addition to this efficient performance, a filter unit, regardless of its size, can be washed and returned to duty again in from ten to twenty minutes time. There is no removing of the surface layer, nor is there any appreciable loss of sand, nor does the sand bed show deterioration through years of use. Today's filter is as capable and as permanent as any apparatus that may be classed as permanent.

It must not be inferred that the filter performs all of its functions unaided. The filter not only has to deal with large volumes of matter, but it also has to deal with quantities of matter so finely divided that if the filter bed had pores smaller than these, it would be absolutely impermeable to the water itself. While the bacteria range from 1/12000th to 1/25000th of an inch on their longest dimension, there are yet particles of matter far smaller than these, and a part of the preliminary treatment through which the water must pass is to gather these fine particles of matter together into masses or to bring them into such form that they will attach themselves to sand grains of the filter bed.

In a well-designed filter plant the first treatment is usually coagulation. This consists of the addition usually of sulfate of alumina in proportions ranging from three-quarters of a grain to three or four grains to the gallon. In recent years a better understanding of the influence of the hydrogen ion concentration has aided us greatly in obtaining a far better degree of coagulation with less of the coagulant.

Following coagulation comes sedimentation. This is effected in a basin holding from one to five hours' supply of water, and while it is referred to as a sedi-

(Continued on page 100)



Waldrich Bleachery showing raw water control

Federal Trade Commission *and the* Chemical Industry

LOOKING back over the docket of the Federal Trade Commission since its very organization the Chemical and allied industries have been freer from prosecution by that body than practically any of the other major industries of the country. This applies to the condition of the Commission's docket now as well as during the past. There must be some very good answer to this situation and it will probably be found in the fact that the chemical industry has stayed well within the bounds of the laws over which the Commission has jurisdiction.

Readers of CHEMICAL MARKETS may be interested in a very brief summary of the way in which the Commission handles its cases. A complaint is filed with the Commission against a firm. No publicity is given to this so-called "informal complaint," because there may be nothing in it. The complaint is turned over to experts of the Commission, who make a brief survey, enough of a one to ascertain whether or not there is anything in it. If there is, the Commission issues what is known as a "formal complaint." This is given to the press for publication. Prior to this last step, however, the firm is given an opportunity to go before the Board of Review of the Commission and set forth any facts which it may have which might lead the Commission to dismiss or stipulate the case.

Following the issuance of the complaint hearings are held before an Examiner of the Commission and when the taking of testimony has been completed a formal argument is held before the Commission itself. The Commission then renders its decision and if it is against the respondent, he has a chance to contest the decision if he desires by appealing to the Circuit Court of Appeals. If this decision is again against him he still has relief before the United States Supreme Court. Many cases of the Commission have been passed on by the highest court in the land and the cases in favor of and against the Commission by that court average about 50-50.

Insofar as the records of the Commission are concerned they do not show that during the past year any so-called "cease and desist" orders have been issued against any strictly chemical company. The only orders issued during the year in allied industries include Harriet Hubbard Ayer (Inc.), New York, toilet preparations; Calumet Baking Pow. Co., Chicago; Houbigant (Inc.), New York, toilet preparations; and J. W. Kobi Co., Seattle, Wash., toilet preparations.

In the case of Harriet Hubbard Ayer, the Commission's decision was appealed to the Circuit Court of Appeals and at the time of this writing no final decision has been rendered.

Another case of more or less interest to the trade is that of Procter & Gamble Co., which was charged by the Commission with false advertising and misbranding and this is before the Supreme Court of the United States.

One of the cases which is still "at issue" by the Commission of considerable interest to our readers is that of the Allied Chemical & Dye Corp. The Commission charged unfair methods of competition in that the respondent by the acquisition of stock or share capital of Barrett Co., General Chemical Co., Solvay Process Co., and National Aniline & Chemical Co. "tends to substantially lessen competition, to restrain commerce in various and sundry articles, products, and chemicals produced by said corporations, and to create in the respondent a monopoly in the lines of commerce in which said corporations are respectively engaged and especially in the chemicals and coal tar products required in the production of dyes and dyestuffs in alleged violation of section 7 of the Clayton Act." This is the most important case now pending before the Commission as far as the chemical industry is concerned.

The Commission also has a case now pending before it against Worrell Manufacturing Co., of St. Louis, manufacturers of insecticides, on which no final action has been taken. The only two other cases of this nature on its docket which have not been decided of interest to the trade includes one against American Disinfecting Co., of Sedalia, Mo., and another case against Chemo Co., of New York, disinfectants.

During the past few years only five stipulations have been entered into between the Commission and chemical manufacturers. They include a stipulation with Plunkett Chemical Co., of Chicago; with United States Color & Chemical Co., of Boston; Albany Chemical Co., of Albany, N. Y.; Chemical Fuel Co. of America, of Louisville, Ky.; and Sizz Chemical Co., of St. Louis. These stipulations run back over a period of years and are considered very few compared with stipulations and cases against firms in other industries.

In addition to cases of the nature referred to above the Trade Commission also has jurisdiction over the Webb-Pomerene Export Act, which takes charge of the export associations formed under that act. This particular part of the Commission's work has not been very active recently owing to the feeling among American manufacturers that the act does not allow them as much leeway as anticipated when the act became law.

The Commission also makes investigations on its own initiative and as requested by Congress, either by both of the Houses or one of them. At the present time the Commission is carrying on an investigation as the result of a Senate resolution into "open price associations." This is of interest to the chemical and every other industry. This inquiry was instituted in March, 1925, but it is understood that it is nowhere near ready for report to Congress. On account of doubt as to the Commission's authority to proceed under the terms of the appropriation act, the inquiry was not actually begun until November, 1925, following the approval of the Attorney General, who was asked for an opinion.

Questionnaires were sent by the Commission to several thousand trade associations requesting them to report as to the various branches of activity in which

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[News and Markets Section]

Methanol Stocks Down Sharply

November Shipments Below Last Year—Lime Shipments Much Greater —Secretary Mellon Claims Methanol is Simplest Denaturant

(*Special to* CHEMICAL MARKETS)

Washington, D. C., Jan. 12.—In November 13,828,855 pounds of acetate of lime were produced in United States compared with 13,-324,137 pounds in the previous November, according to Department of Commerce. In November 15,-297,856 pounds were shipped compared with 12,926,238 shipped in November, 1925, and in November 16,217,967 pounds were on hand compared with 19,406,397 pounds in November, 1925.

Canadian production of acetate of lime in November was 920,903 pounds compared with 1,040,358 pounds in November, 1925. Shipments in Canada totaled 1,228,304 pounds compared with 464,645 pounds in the previous November. Stocks on hand amounted to 1,-148,715 pounds compared with 1,-200,891 pounds the previous Novemer.

Methanol production in November in United States was 695,865 gallons compared with 676,987 the previous November. Shipments in November were 691,186 gallons compared with 783,541 in November, 1925. Stocks on hand the end of November were 555,290 gallons compared with 1,422,961 in November, 1925.

Canadian production of methanol totaled 38,520 gallons compared with 47,283 gallons in November, 1925, while November shipments were 45,569 compared with 56,232 gallons. Stocks on hand the end in November, 1925.
947 gallons compared with 49,010 of November in Canada were 31,-

(*Special to* CHEMICAL MARKETS)

Washington, D. C., Jan. 11—Appearing before the Ways and Means Committee of the House of Representatives today, L. C. Andrews, Ass't. Secretary of the Treasury came out in support of the bill permitting the manufacture of distilled spirits for medicinal purposes. This is the bill which is sponsored by the administration and hearings will be continued.

Wood alcohol is characterized as the simplest denaturant by Secretary Mellon in response to a request from Congress that he furnish information on the 'use of poisons as denaturants'. Enlarging on his statement the Secretary says "wood alcohol as a denaturant constitutes the most effective means of accomplishing the requirements of the national prohibition act that the denatured alcohol be unfit for use as an intoxicating beverage."

In support of his stand the Secretary submitted a letter from Louis A. Harris, health commissioner of New York stating that only some of the 750 deaths in that city during 1926 were possibly due to methanol or other substances employed to denature or medicate alcohol.

NIAGARA AMMONIA TO STOP MAKING

Henry J. Pierce, president of the Ammonia Corp., when interviewed by a representative of CHEMICAL MARKETS, stated that production of anhydrous ammonia will be stopped March 1 at the plant of the Niagara Ammonia Co., at Niagara Falls, N. Y. Mr. Pierce stated that the present prices of ammonia made it impossible to continue operations.

ATTEMPT TO CHECK GOVERNMENT FORMULAS

Lacquer and Chemical Corp., 214 Fortieth st., Brooklyn, has obtained a temporary injunction to prevent enforcement by the Federal Government of the regulation by which Formula 3-A specially denatured alcohol, may no longer be withdrawn for use in the manufacture of varnishes, lacquers, stains, polishes, disinfectants and liquid soaps other than toilet soaps. Hearing on the application for a permanent injunction was set for Jan. 12. The action of Lacquer and Chemical Corp. is the first important move to stop the Treasury Department by legal injunction from carrying out its plans for poisoning alcohol in an attempt to cut down its use for beverage purposes.

NEW YORK PAINT MEN FAVOR METHANOL USE

H. S. Chatfield, chairman Industrial Alcohol Committee, National Paint, Oil and Varnish Association said last week that while his association would not become involved in any controversy over the Volstead Act, it would oppose any attempt to change the twenty-year-old tax free denatured alcohol statute. Mr. Chatfield added:

"The Act of June 7, 1906, provides that in order to be tax-free for the arts and industries, ethyl alcohol must be denatured with methyl (wood) alcohol or other denaturing material or materials, or admixture of the same, suitable to the use for which the ethyl alcohol is withdrawn, but which destroys its character as a beverage.

"Since the enactment of the Volstead Act, bootleggers and their chemists have been striving to make illicit use out of every alcoholic product—patent medicines, flavoring extracts, perfumery, hair tonics, toilet articles and even shoe polishes—and now, in their extremities, have been attempting to 'clean' the completely denatured alcohol, which is used principally in non-freezing solutions for automobile radiators. Because they have failed in their criminal pursuit to eliminate all of the denaturants from the denatured alcohol, the hue and cry is raised against industrial alcohol."

Manufacture of ammonium phosphate or other high grade fertilizers at Muscle Shoals is proposed in a bill introduced by Representative Bell, of Georgia, appropriating $150,000,000 for the purpose. The fertilizers are to be sold to farmers for cash at cost.

Bills have been introduced at Washington to relieve land owners whose property is being surveyed for potash from paying drilling costs when no potash is discovered.

Henry V. Walker, Co., Belleville, N. J., is now engaged in the manufacture of lacquers.

JAPAN'S NEW DYE MERGER

(*Special to* CHEMICAL MARKETS)

Osaka, Japan, Dec. 17—Dyestuff manufacturers in Japan, heretofore associated under the name of "Dyestuff Manufacturers Society" ("Senryo-seizo-gyosha Konwakai"), at the general meeting on Nov. 6 at Osaka, dissolved and reorganized "The Association of Japan Dyestuff Industry" (Nippon Senryo Kogyo Kai"). The new association consists of manufacturers of synthetic dyestuffs and all other coal-tar products essential oils, pharmaceuticals. There are fifty members, among them Japan Dyestuff Manufacturing Co., Ltd., Osaka, Mitsui Mining Co., Ltd. Sankyo Co., Ltd., Tokyo. The headquarters are with Japan Dyestuff Manufacturing Co., Ltd., Kasugadecho, Konohanaku, Osaka. The association is expected to serve Japan's coal-tar industry especially.

At a meeting of the executive committees of six leading Chambers of Commerce in Japan held Dec. 2 at Tokyo Chamber of Commerce, Katsutaro Inabata, president of Osaka Chamber of Commerce, was appointed delegate to the tenth International Labor Conference which opens May 25 next. Mr. Inabata, also having a mission as delegate of all Japan's Chambers of Commerce to return the call of Governor General Marshal Merlin of French-Indo-China, sailed on Dec. 11 on Nippon Yusen Kaisha liner "Kashima" for Indo-China. After calling upon the Governor, the delegate will inspect the industries of the French settlement, and proceed to Switzerland directly to attend the Labor Conference. Mr. Inabata is president of Japan Dyestuff Manufacturing Co., Ltd.

Yuzaburo Moriyama's appointment as manager of Nippon Senryo Seizo Kabushiki Kaisha, (The Japan Dyestuff Manufacturing Co., Ltd.), has necessitated his resignation as representative of Naigai Chemicals Trading Co., and Chimata Kitajima has succeeded him in the management.

Thompson-Hayward Chem. Co., Kansas City, have purchased a five story warehouse plant containing 30,000 sq. feet of floor space at Carr & Levee sts., St. Louis, to better serve their trade in the St. Louis district.

John Davis, Detroit Chemical Works, died recently at the age of 82. He was born in Westfield, Mass.

STRIKE COST $3,000,000,000.

Six hundred million pounds sterling (about $3,000,000,000) was the loss by the British coal strike, says Sir Max Murpratt He considers bold measures necsesary to minimize the depressing effect upon the country's finances, in a letter to London "Morning Post," saying:

"Government expenditures, broadly speaking represent about a quarter of our total national income, successive budgets being based on some such figure. The Government balance-sheet is therefore faced with a deficit of from £100,000,000 to £150,000,000 spread over perhaps three years. This should be frankly faced as a capital loss, to be spread over a period, say twenty years, in just the same way as the losses due to the War. Leaving the Sinking Funds alone, the budget should be balanced by borrowing £200 millions, the debt on the Unemployment Insurance Fund and the debts of Poor Law Guardians wiped out, and grants for the relief of unemployment to the municipalities resumed under strict supervision. These trenchant reforms would, naurally, be accompanied by a complete recasting of the Poor Law."

Quality Piece Dye Works, Woonsocket, R. I., petitioned into bankruptcy by Petroleum Heat & Power Co. and other creditors, owed the following sums: Petroleum Heat & Power Co., $6,210; United States Color & Chemical Co., Boston, $1,108; A. W. Buhlman, New York, $34,620, making the total of claims, $41,939. Property of Quality Piece Dye Works, including real estate, machinery and stock was sold at a mortgagee's sale last October and subsequently was acquired by interests which later formed Crown Piece Dye Works, now operating the plant.

A symposium on gasoline, officially announced as "the largest open meeting devoted solely to the subject of liquid fuels that has ever been held in this country," will be held at Massachusetts Institute of Technology, Jan. 15, by Northeastern Section of American Chemical Society.

Sereno P. Fenn, vice-president and secretary of Sherwin-Williams Co., Cleveland, died Jan. 3 at his home in that city. Mr. Fenn was born Apr. 25, 1844, at Tallmadge, O.

BRITISH FAIR EXHIBITS

British Industries Fair, which will be held in London and Birmingham, Feb. 21 to March 4, 1927, has a chemical section which will have many exhibits by leading chemical manufacturers. United Alkali Co. will have a heavy chemical booth of large proportions. Albright & Wilson will show calcium phosphate and other products, and a special exhibit of silicon ester to illustrate its value in preservation of stone-work.

A. Bocke Roberts & Co. will show a complete range of solvents, plasticizers and artificial resius. The firm makes diaceton alcohol, diamyl phtalate, pale glycerin resin ester.

Gas Light Coke Co., largest manufacturers of tar, ammonia and cyanogen products, in England, will exhibit coal tar pitch, creosote, red tar, benzol products, crystal carbolic acid, cresol, liquid disinfectants, pyridin, naphthalene, beta naphthol, salicylic acid, bleaching powder, sulfate of ammonia, liquid and anhydrous ammonia, Prussian blues.

Graesser-Monsanto Chemical Works will show pure phenol, cresol and cresylic acid, and derivatives.

Howards and Sons—New solvents for making soaps (textile, household and laundry).

Salt Union—Products made from natural brine. Also salodine, iodised salt, Union salt, Falk salt, bleaching powder, caustic soda, bypochlorite of soda.

South Metropolitan Gas Co.—An ancient tavern will be reproduced to show the chemical operations of the company.

Thomas Tyrer & Co.—Nickel formate, previously made only in America, cobalt compounds, soda citrate, bismuth salts.

U. S. Tariff Commission is sending out blanks for the census of dyes and other synthetic organic chemicals. Commission intends to have a preliminary report ready for the trade not later than April. Report includes products derived from coal tar, including crudes and intermediates and finished products. The firms are to be asked concerning purchased coal tar intermediates consumed in 1926, and employees and rates of pay and research and experimental work.

Fast colors for dyeing cotton uniforms for the army are being sought by Bureau of Standards, dye and textile concerns, to replace the olive drab adopted in 1909, which fades when laundered.

MUSCLE SHOALS BID

(*Special to* CHEMICAL MARKETS)

Washington, Jan. 12.—Bid of Farmers Federated Fertilizer Corp. for Muscle Shoals was brought directly to the attention of President Coolidge when the sponsors of the corporation, John W. Newman, Versailles, Ky.; A. P. Sandles, Ottawa, O.; and A. L. Sponsler, Hutchinson, Kan., called at the White House, last week, and personally explained major features of their bill. They were accompanied by Congressman B. Carroll Reece, of Tennessee, who introduced the leasing bill in the House. From the White House, the incorporators went to the Capitol for conferences with Senate and House leaders regarding committee hearings on the Farmers Corp. proposal. As spokesman for the group, Mr. Newman gave the following statement covering the White House visit:

"We told the President we had submitted a proposal which, in our opinion, carried solution of the Muscle Shoals problem, and represented the only genuine farmers bill that had been offered. We said that the fight had just begun, to utilize the great plants now lying idle at Muscle Shoals for the benefit of the farmers and afford quick agricultural relief through low-price fertilizers. We also told the President we were confident that committee hearings in Congress would result in a favorable report and final action at this session of Congress."

CELEBRATE BIRTHDAY OF LUTHER MARTIN

Wilckes-Martin-Wilckes Co., New York, celebrated the 76th birthday of Luther Martin, oldest lamp black manufacturer in United States, at Drug and Chemical Club. Among those present were Ferdinand Wilckes, Luther Martin, jr., vice-president and manager of sales for Wilckes-Martin-Wilckes Co., and Luther Martin, 4th. The original Luther Martin was the first to produce lamp black on a commercial basis in Philadelphia in 1849, and the three generations of Martins present were all born in Germantown, Philadelphia. John J. Heck, who has been superintendent for many years of the Wilckes-Martin-Wilckes Co.'s plant also attended.

John T. Milliken, Jr., is now in charge of the purchasing dept. of J. T. Milliken Co., St. Louis.

SODIUM NITRITE COSTS

Sodium nitrite costs in United States, which are being sought by Norwegian Nitrogen Products Co., New York, will be kept secret by Tariff Commission, in a brief filed by the Department of Justice in U. S. Supreme Court. The Norwegian company seeks a writ of mandamus to compel the Tariff Commission to disclose information disclosed by an American company. A hearing brought out the fact that the Tariff Commission sent its representatives to Norway and interviewed the Norwegian Company, which declined to give information regarding its cost of production, but, later, the Norwegian Company, at the hearing before the Commission, asked the Commission to disclose information regarding the cost of producing sodium nitrite in the United States, as given to the Commission by domestic producers.

The Department of Justice quotes the conclusion of the Court of Appeals of the District of Columbia that "the case is moot." It says in the brief that the Commission has completed its investigation and the President has announced a decision, adding: "Since the President has not made such a request, the courts may not compel the Commission to reconsider the matter or make a new report and the disclosure of the information desired by the Norwegian Company would now be futile and the relief sought unavailing."

QUICKER SERVICE

By issuing a NEWS AND MARKET EDITION *weekly containing only news, changes in market position of various chemicals, imports for the previous week including the week-end, and latest patents of all countries,* CHEMICAL MARKETS *will be the fastest service available.*

On the second Thursday of each month CHEMICAL MARKETS *will reach its subscribers with timely editorials, market analysis and chemical business articles, market reports and complete price information covering the previous month, in addition to the latest news, imports and patents from all countries.*

CYANAMID RATES

(*Special to* CHEMICAL MARKETS)

Washington, D. C., Jan. 12—American Cyanamid Co. against Michigan Central Railroad Co. before Interstate Commerce Commission has been decided by examiner Walsh of the commission as follows:

Rates on cyanamid, and crude cyanide, in carloads (except crude cyanide, in tank cars, to Warners, N. J.) from Niagara Falls, Ontario, to points in trunk line territory, and on coal, and coke, in carloads, from points in trunk line territory to Niagara Falls, Ontario, found not unreasonable.

Rate on crude cyanide, in tank cars, from Niagara Falls, Ontario, to Warners, N. J., found unreasonable to the extent it exceeded 22.5 cents per 100 pounds. Reparation awarded.

Rates on fluorspar, in carloads, from New York, N. Y., Philadelphia, Pa., and Baltimore, Md., to Niagara Falls, Ontario, found unreasonable to the extent they exceeded by more than 60 cents per long ton, rates on the same commodity from the same points to Buffalo, N. Y. Reparation awarded.

Rate on crude rock salt, in carloads, from Halite, N. Y., to Niagara Falls, Ontario, found unreasonable to the extent it exceeded 10 cents per 100 pounds. Reparation awarded.

CHEMICALS IN ST. LOUIS

Chemical prices and market conditions at St. Louis and Kansas City are discussed in "The Test Tube," Christmas number, issued in December by Thompson-Hayward Chemical Co., under the heading "Chemical Prophesies!"

Linseed oil has but few friends at the present time but our guess is that oil at present levels can't hurt anybody.

Denatured alcohol—We are still pessimists on this item and unless Providence intervenes with a very long severe winter, we would rather be short of this article than long, by Jan. 1.

Glycerin—The use of this product for anti-freeze has exceeded all ideas, with the result that no surplus will be available for the summer months. Our idea is that this item will continue to maintain a firm course with the removal of all pressing stocks.

Blue Vitriol is maintaining a firm basis but we can see no reason for an additional increase.

WATCH CHEMICAL BILLS

Legislatures of 44 states will convene between January and midsummer, says Secretary H. W. Cole, of Insecticide & Disinfectant Manufacturers Association. Sessions began Jan. 3 in California, Idaho, Montana, Ohio and Tennessee. On Jan. 4, in Delaware, Minnesota, Nebraska, North Dakota, Pennsylvania, Rhode Island, South Dakota and Oklahoma. On Jan. 5, in Colorado, Connecticut, Illinois, Maine, Maryland, Massachusetts, Missouri, New Hampshire, New York, North Carolina, Vermont and the State of Washington. Thereafter sessions will continue to open. Florida meets in April and Georgia in June.

Mr. Cole continues: "Pepper Senate Caustic-Acid Bill No. 2320, passed the Senate April 2, and was reported favorably by the House Committee on June 17. It is therefore in position to be taken up most any time in the House of Representatives. There is, however, enough opposition to this bill to make it unlikely, in our judgment, that it will be taken up before Congress adjourns. However, any opposition to this bill ought to manifest itself now so that it would be among the measures to which there is known opposition."

Merrimac Chemical Co. has issued a year book giving the process of manufacture, properties, containers and uses of the various industrial chemicals of its manufacture. The book also contains tables of specific gravities of solutions of various chemicals and other valuable information.

Crown Willamette Paper Co., of San Francisco, has announced plans for the erection of an $8,000,000 pulp and paper plant near Gray's Harbor, Wash. The first unit, a 100-ton sulphide pulp mill, will be erected at once.

J. M. Weiss, of Weiss & Downs, chemical engineers, New York, spoke before North Jersey Section of American Chemical Society, on "The Volatility of Acetone-Benzol Paint and Varnish Removers."

Alex. C. Fergusson, Jr., has been appointed sales agent for the Buffalo Electro Chem. Co., in the Pennsylvania, New Jersey and Delaware territory for the sale of 100 volume hydrogen peroxide.

Compressed Gas Manufacturers' Association meets Jan. 24, at Hotel Commodore, New York.

CHEMICAL EQUIPMENT LECTURES PREPARED

Thirty-nine papers on chemistry and chemical engineering make up the lecture course for 1927 prepared by chemical equipment manufacturers to be delivered at technological institutions. Among the papers listed are Industrial heating by oil circulation—(Parks-Cramer Co.); pumping equipment for the chemical industry—(Duriron Co.); hydraulic separation and concentration with the Fahrenwald sizer—(Dorr Co.); filtration equipment in today's industries—(United Filters Corp.); electric power in the chemical industry and in chemical processes—(General Electric Co.); glass as an industrial material—(Corning Glass Works); oxy-acetylene welding in chemical plant construction—(Linde Air Products Co.).

INDIGO CROP DECLINES

Ninety-nine thousand three hundred acres under indigo is the crop estimate for India, 1926-27, compared with 111,200 acres in 1925-26, based on reports from six provinces. The yield of dye is estimated at 19,600 hundredweight (one hundredweight=112 pounds) against 22,000 hundredweight in 1925-26.

In 1917-18, when the decline started, over 700,000 acres were cultivated.

Seasonal conditions, on the whole, have been favorable and the present crop situation is reported fairly good writes Consul General Lay, Calcutta.

Synthetic indigo production in United Kingdom increased in 1925, although total output of dyestuffs declined. In the case of vat blues, of which synthetic indigo is by far the most important item, the 1925 production reached 6,851,000 lbs., or an increase of more than 2,200,000 over the corresponding 1924 figure.

Glidden Co. laboratories, Cleveland, O., have succeeded in developing an elastic oil finish with a lacquer schedule in accordance with requirements of manufacturers of motor vehicles, traction and transportation equipment who want an elastic oil having finish varnish gloss and yet can be applied on the same schedule as nitro-cellulose lacquers.

Use of "Army and Navy" in advertising paints is a complaint made by Federal Trade Commission against Army and Navy Surplus Warehouse, San Francisco.

YOUTH SCORES AGAIN

Head of the largest company in its industry at 35 is an enviable record, and reminds one of the Horatio Alger stories of boyhood—or of the stories one sees in the newspapers of the poor immigrant lad who scrimps aand saves, selling shoelaces as the start of his business career, finally achieving his lifelong ambition of owning the

Brooklyn Bridge or something equally impressive, says "Wall Street Journal."

But there is no parallel in this case. Russell R. Brown has just been elected president of U. S. Industrial Alcohol Co., succeeding in that office Horatio S. Rubens, who is one of the shrewdest and best posted men in the world on alcohol, molasses and Cuba, where molasses is produced.

Educated in New York schools, and completing his schooling in Europe, Russell Brown went to work for Uncle Sam in 1914. For three years he was with the Internal Revenue Bureau of the Treasury Department at Washington. From there it was not a far jump to the alcohol business, that industry having continual dealings with the government. In November, 1917, he went to U. S. Industrial Alcohol Co. as assistant treasurer. In 1922, he took over the office of comptroller, in 1924 was made a director and in January, 1926, appointed assistant to the president. And what was more logical than to elect as the new president, when Mr. Rubens decided to resign to devote himself to personal affairs, a young man who knew the business inside and out?

Large Cottonseed Carryover

The following market letter by W. A. Stort of Edward Flash Co., is a resume of the cottonseed oil position during December.

December 28, 1926.

Census Report, December 18th, indicated consumption 343,000 bbls. refined oil for November, some less than generally expected. It is also noticeable that refined oil consumption for the first four months, August-November, of this season was 203,000 bbls. (50,000 bbls. per month) less than for same four months of last season.

November seed receipts were considerably heavier than estimated during the month, and the visible supply, December 1st, seed, crude and refined, amounted to 1,841,000 bbls. refined oil or 467,000 bbls. more than December 1, 1925.

Unfavorable weather during December unquestionably hindered ginning and seed movement, and hardly anyone believes that final ginnings will equal the Government's estimate of this season's cotton crop, but the ginning of seventeen million bales, anyway, seems sure, and the oil production therefrom will be the largest for any season on record.

The market has shown a very firm, stubborn undertone recently, and further decline will be hard fought, but the production is of such proportion it is hardly reasonable to expect material advance that can be sustained until considerably more Oil has been disposed of into consumptive channels.

Much crude sold at 6¼c Southeast mills this month; 6 1/2c is now bid for any shipment, but price levels are still prohibitive for liberal export or soap business.

If, during January, May and July deliveries can be sold at 8.75c or higher, we strongly urge selling on hard spots for moderate profits, as, from the present outlook, lowest prices for this season have not been seen, and the indications are that there is considerable accumulation taking place which will require liquidation during the Spring before the situation is perfectly healthy.

The prospective supply for the balance of this season indicates a heavy carryover August next, and, therefore, price level will depend upon next crop prospects and, more than usual, on the price of other fats as we go through the Spring.

HIGH AND LOW PRICES ON N. Y. PRODUCE EXCHANGE OF PRIME SUMMER YELLOW C/S OIL

	Season 1921-1922		Season 1922-1923		Season 1923-1924		Season 1924-1925		Season 1925-1926		Season 1926-1927	
	High	Low	High	Low.	High	Low.	High	Low	High	Low	High	Low
	1921		1922		1923		1924		1925		1926	
Aug.	986	660	1225	910	1238	965	1500	962	1250	1013	1634	1114
Sept.	1050	666	1240	794	1349	930	1400	950	1233	1018	1561	930
Oct.	1053	699	1193	751	1355	864	1300	925	1200	935	1400	840
Nov.	1029	760	1625	730	1200	818	1185	882	1120	932	1247	785
Dec.	1018	768	1025	738	1196	811	1168	852	1115	931	1183	784
	1922		1923		1924		1925		1926		1927	
Jan.	1012	776	1140	745	1200	815	1178	900	1200	939	1162	780
Feb.	1012	817	1120	750	1192	830	1160	983	1125	950	1117	794
Mar.	1198	828	1222	761	1210	855	1193	945	1260	956	1104	790
April	1180	835	1215	777	1193	933	1210	995	1300	987	985	814
May	1203	849	1230	828	1221	948	1240	1010	1675	973	990	801
June	1186	865	1223	980	1150	968	1248	1000	1605	1030	871	820
July	1223	895	1240	1012	1415	946	1257	1002	1650	1022	880	829

To December 28, 1926

MOTHS KILLED BY DRUGS

Discovery of a dyed-felt at Jeffersonville Quartermaster Intermediate Depot which resisted the attacks of moths, led the Quartermaster General of the Army to hold a conference with representatives of Bureau of Standards, Navy, and Agriculture, from chemical and dye concerns, with a view of determining whether certain dyes or colors render textiles immune to moths.

If it is ascertained that certain dyes or colors do thwart the ravages of moths it will result in enormous savings to the entire textile industry, as well as to the Government. The Department of War's main interest in the matter, it was explained, is for the safekeeping of quantities of woolen cloth left over from the World War, and now held in storage. The following attended the conference:

S. M. Rosenbery and A. P. Clausen, Larvex Corp., New York City; J. Bardcke, Newport Chemical Works, New Jersey; M. H. Goldman, chemist, National Association of Dyers and Cleaners; H. F. Herrick, Color Laboratory, Department of Agriculture; R. T. Cotton and Dr. E. A. Back, Department of Agriculture; E. E. Waters and W. D. Apple, Bureau of Standards; E. H. Ehrman, Navy Department; Col. John S. Chambers, Q. M. C., and E. E. Lightfoot, O. Q. M. G.

NITROGEN OUTPUT GROWS

Two new plants for nitrogen fixation by direct synthetic ammonia process were put in operation in United States in 1926, two others are under construction and several have increased their capacities. Production of synthetic ammonia with the plant capacity now finished and under construction is expected soon to saturate all uses except the preparation of fertilizer. Experience and cost data now being assembled by the government research laboratory do not discourage the belief that it may soon be feasible for the synthetic ammonia producer to expand into the fertilizer field.

E. I. du Pont de Nemours & Co., plan to recover hydrogen from coke-oven gas as a by-product. Its decision to use West Virginia coal for the direct production of water-gas for separation by the Claude system is an indication that the high cost of obtaining nitrogen is becoming less formidable. Continued development of nitrogen fixation on an enormous scale is under way in Europe, and European methods are still largely the model for the United States.

This ammonia process is the most favored in Europe. A report to the fixed nitrogen bureau says there has been some conversion of cyanamide plant equipment in Europe to operate newer synthetic ammonia methods. In Germany the production of nitrogen compounds has expanded beyond present needs, and the same condition may exist soon in England and France. The resulting necessity for exportation has given rise to a vigorous sales campaign, with India and China regarded as the most promising outlets for excess fixed nitrogen.

Schoelkopf & Co., Buffalo, have closed their plant and converted it into a warehouse under the name of Market Terminal Warehouse. Former employees of the company have organized Buffalo Tanners, Inc., 50 Hudson st., Buffalo.

Increase of 93 per cent in dyeing and cleaning work in United States is reported in 1925, being valued at $102,647,000 compared with $53,182,000 in 1919, says the Census Bureau.

Harry Baylor has been elected vice president International Agricultural Co. He has been with the company thirteen years.

[The Industry's Finances]

AIR REDUCTION EXCEEDS RECORD IN EARNINGS

Estimate Is $11. a Share for 1926—Previous Years Show Steady Growth —Balance Sheet Discloses Strong Financial Position—Company Separates Air Into Its Constituent Parts—Sells Oxygen, Carbide, Acetylene

Air Reduction is reported to have earned $11 per share in 1926. At this rate, says "Wall Street News," profits would establish a new record eclipsing Air Reduction's banner year of 1923 when net amounted to $2,138,023 after charges and taxes. In the twelve months ended Dec. 31, 1925, net income totaled $2,021,291, or $10.24 a share on capitalization outstanding at that time. Net income in the nine months ended Sept. 30 last aggregated $1,647,192 after charges and Federal taxes, equal to $8.19 a share. Before deduction of Federal taxes profits in the nine months totaled $9.77 a share, compared with $8.01 a share in the corresponding period in the previous year.

Analysis of the balance sheet of Air Reduction as of Sept. 30 last discloses a strong financial position. Net working capital aggregated $6,731,818 with the ratio of current assets to current liabilities about seven to one. Company had cash on that date of $3,022,652 and marketable securities of $1,571,107. Its property account was carried at slightly over $6,606,000 and investment at $2,463,027. Accounts payable amounted to $376,447.

Air Reduction manufactures and sells oxygen, carbide, acetylene, nitrogen, argon, calorene and other gases, oxyacetylene welding and cutting apparatus and chemicals.

[Foreign Exchange]

	Par	Current
Great Britain (pound sterling)	4.866	4.85
France (franc)	.193	.039
Italy (lira)	.193	.044
Belgium (franc)	.198	.139
Denmark (krone)	.268	.267
Czechoslovakia (crown) per 100	20.30	2.96
Holland (florin)	.400	.400
Holand (florin)	.401	.400
Poland (zloty)	.193	.120
Norway (krone)	.258	.254
Spain (peseta)	.193	.155
Sweden (krone)	.268	.267
Switzerland (franc)	.193	.193
Argentina (peso)	.414	.413
Brazil (milreis)	.324	.116
Japan (yen)	.499	.488
India (rupee)	.485	.484
China (Silver dollar, Hongkong)	.789	.475
(Tael—Peking silver)	1.146	.620
(Tael—Shanghai, silver)	1.986	.588

Earnings of By-Products Coke Corp., Chicago, according to an official, may be slightly less for the last quarter than the average for the first three quarters. Net income before Federal taxes for the nine months ended Sept. 30 amounted to $1,673,091, or an average of about $557,700 per quarter. Should earnings before Federal taxes equal $500,000 in the final three months, net for the year would be equal to about $10.33 a share on 190,011 shares of common stock before the government tax.

With capital of £60,000 in £1 shares. Columbia Cellulose Syndicate has registered in London, England, as a public company, to adopt an agreement with Cockspur Trust, and to carry on, among other things, the manufacture of and dealing in rayon and textile fabrics. Incorporators are W. E. Perkins and five others, who will appoint the first directors.

British Cyanide Co., owing to heavy losses, proposes to cut its capital from £393,000 to £62,000. The preference stock will be reduced by writing off 10s. a share and the ordinary will be cut 18s. a share, but the preference rights will be preserved by increasing the dividend on them from 5% to 10%. Ordinary shareholders will be offered 672,000 further 2s. ordinaries.

Glidden Co., Cleveland, reports for the year ended Oct. 31, net income of $1,861,945 after all charges equal after 7% cumulative prior preferred dividends to $3.39 a share on the 400,000 no par common shares outstanding. This compares with $2,209,757 or $4.27 a share on the common in the preceding fiscal year.

Hercules Powder Co., Wilmington, Del., has declared regular quarterly dividend of 1¼% on preferred, payable Feb. 12 to stock of record Feb. 5.

Three hundred shares Chemical, Oil and Gas Co. were sold at auction by Adrian H. Muller & Sons, last week, for $9.

CELLULOID SHOWS PROFIT

Celluloid Co. has been reorganized, says a letter to stockholders by Chairman Heath. "Operating economies amounting to approximately $350,000 per annum have been effected. Since June 30, 1926, notes payable at the bank have been reduced from $500,000 to $250,000. Notwithstanding the unfavorable conditions of the celluloid industry, as a whole, the shipments to Dec. 1, 1926, show an increase of 10% over the same period of 1925. The company's books for the first eleven months of 1926 show a small operating profit compared with a serious loss for the corresponding period of last year."

E. E. Van Sickle has been elected vice president Corn Products Refining Co., and Jeremiah Millbank has been made a director. Mr. Millbank succeeds the late A. A. Smith. Mr. Van Sickle, who came from the ranks, has been in charge of the bulk sales department of the corporation for a great many years. Mr. Millbank is a big factor in the affairs of Southern Railway and Borden Co.

Silica Gel Corp., London, was defendant in suit by Midway Oil and Storage Co., for damages, and Justice Rowlatt awarded Midway Oil and Storage Co. verdict for £17,448. Plaintiffs claimed damages for breach of warranty in supply of a silica gel refining unit and his Lordship held that the defendants were liable.

Bonds called in advance of maturity and due this month include Sherwin-Williams of Canada issue of $1,571,400 due in 1941, called price 105; Aetna Explosives A 6s. issue of $271,200 due in 1931, called price 100.

American Smelting & Refining Co. has declared quarterly dividends of $2 a share on common stock, payable Feb. 1 to stock of record Jan. 14, and $1.75 share on preferred stock, payable March 1 to stock of record Feb. 4.

Royalties in British Celenese, Ltd., will be sold by International Holdings & Investment Co., to aid British Celenese. The Holdings company has already disposed of Celenese preferred shares and debentures.

W. A. Robinson & Co., New Bedford, Mass., has been absorbed by Cook, Swan & Young Co., New York City. W. A. Robinson & Co. handled fish oils.

[Stocks & Bonds]

	1925 High	1925 Low	1926 High	1926 Low	Current Bid	Current Asked	Ann. Div.
*Air Reduction	115	86½	146¾	107½	139¾	140¼	5
*Allied Chem	115¾	80	148⅞	106	136¼	136½	6
*Allied Chem pfd	112¼	111	122¾	118¾	120¾	121½	7
Am Ag Chem	29⅞	13½	34⅝	9	13¼	13¾	
*Am Ag Chem pfd	82½	36½	96½	35⅝	46½	47	
Am Can	...	...	63⅛	38⅞	47½	47⅝	2
Am Can pfd	121⅞	115	130⅛	121	127	129	7
*Am Cyan "A"	...	...	46	36⅞	35	40	
*Am Cyan "B"	...	...	47	35¼	34	35	
*Am Linseed	59¾	20	52⅞	25⅝	29¼	29¾	
*Am Linseed pfd	89	58	87	68¾	70½	71	
*Am Metals	57⅝	45¾	57⅜	42¼	43	43¼	4
*Am Metals pfd	118	110	120	113½	108	111	7
Am. Rayon Prod.	51⅞	26⅝	35¾	29¾	...	...	
Amer Smelting	114½	90⅜	152	109⅝	140	140½	8
*Am Smelting pfd	115¼	105½	122⅜	112⅞	120¼	121	7
*Am Zinc	12½	7⅞	12⅛	5⅛	9	9⅜	
*Am Zinc pfd	44⅞	24¾	54½	20	46¼	46½	
Anglo Chil. Nitrate	101	97½	100⅛	95¼	95½	...	
*Archer-Dan-Mid	46	26	34⅞	36	40½	41½	3
*Archer-Dan-Mid pfd	105	90½	108	100	106	107¾	7
*Armour Del pfd	100	90⅛	97⅞	90¼	93	94	7
*Atlas Powder	65	45	64	54	59	60½	4
*Atlas Powder pfd	94	90⅛	97⅞	96	98½	100	6
Brooklyn Un Gas	100¼	73⅛	98	68	91⅝	92¼	4
By-Products Co.	...	...	93	53	67⅛	68¼	2
By-Products Co. pfd	...	...	...	...	108	...	8
*Calla L & Z	4¾	1¼	2⅝	1½	1½	1⅝	2
Canad. Ind	20⅝	14	20	16¼	16⅞	...	
Canad. Salt	154½	140	145	131	105	115	
Casein Co.	...	...	...	...	149	154	6
Celluloid Corp	50¼	18⅝	26	15	18	20	
Celluloid Corp	97	65	68	55	65	70	
*Certainteed Prod	58¾	40¾	49½	36⅛	42⅞	43	
Charcoal Iron	55⅛	12⅞	33½	24	10	20	
Chesebro Mfg. Co.	74⅝	48¼	78	65	75½	78	
Clark Co. Fred	5	2⅛	5	2¾	2⅛	4	
Cleve Cliff Iron	75	56	75	69½	70	75	
Columb Carbon	62¾	40¾	70¾	55⅝	68¼	69	4
*Com Sol B	189	80¼	237	118¼	233	234	8
*Cont Can	93½	60	92½	70	70⅝	71	5
*Cont Can pfd	118	114	126	117½	120½	122½	7
*Corn Prod	42⅜	32⅝	51⅝	35⅝	48¼	48⅜	2½
*Corn Prod pfd	127	118⅛	130¼	122½	128	129	7
*Davison Chem	40¾	27⅞	46¾	27⅛	30¼	30½	7
*Davison Chem. pfd	...	...	...	...	43½	43½	
Devoe & Rayn A	90¼	52	104⅛	31	38¾	40	2.40
*Devoe & Rayn B	...	...	105	40	103	105	
*DuPont de Nem	104¾	90	110⅛	100¾	109⅛	109⅜	6
*DuPont de Nem	271¼	113¼	181½	157	174¼	174½	7
*Eastman Kodak	118	104⅞	136¾	106⅝	128½	129	8
*Freeport Texas	24⅞	8	36	19⅝	35⅝	35¾	2
*Gen Asphalt	70	42½	94¼	50	85½	86	
*Gen Asphalt pfd	109	86½	130	94⅞	127	130	
*Glidden	26½	12½	25¾	15⅜	20⅞	21¼	2
*Gold Dust	51	37	56½	41½	44¾	45¼	
Grasselli	133½	125	145	120	125	130	8
Grasselli pfd	106	101¾	103½	102	101	103	6
Hercules Powd. pfd	113½	104½	115	110	116	118	7
*Household Prod	47⅛	34½	48⅜	40	44¼	44½	3½
Industrial Rayon	26⅞	17	19⅞	10½	6½	7	
*Int Agr	24½	7⅛	26¼	9⅛	9	10	
*Intl Agr pfd	85	40	95	57	62	64	7
*Int Nickel	48½	24½	46¼	32⅜	41⅞	42	2
*Intl Salt	87⅝	67	84⅝	61½	65	67	6
Mac And & Forbes	...	...	46¼	40	40½	41½	
*Mathieson Alk	107¼	51	106⅛	62½	82	84	4
*Mathieson Alk pfd	100	97	105	100	100½	105	7
Merck & Co.	...	...	...	...	66	69	
Merrimac	86	78	83	72	75	80	10
*Natl Dist	43½	29⅝	34	12½	20	20½	
*Natl Dist pfd	81	52½	73⅛	57	44	46½	
*Natl Lead	174	138⅛	181	138	166	166¾	8
*Natl Lead pfd	118¾	114¼	120	116	117½	118½	7
N J Zinc	214½	181	214½	180	203	206	
Niag A pfd	...	...	...	...	80	85	
*Owens Bottle	60⅜	42¾	90¾	53¾	78	78¼	5
Penn Salt	...	...	91	71	76	77	5
*Peoples Gas Chi	130	117	131	117	126⅛	127¼	8
Proc. & Gam	140	109	163	142½	159	...	
Royal Bak Pdr	221	182½	213	190	163	168	8
Royal Bak Pdr pf	105	100	105½	102	100	102	6
Shawinigan	175	130½	191	167½	170	...	
*Sherwin-Williams	43½	42½	108	107	106⅝	...	
St. Joseph Lead	52½	36⅝	48⅛	36⅝	41¾	42¼	3
Silica Gel	35	11¼	22¾	11⅞	17½	...	
Swan & Finch pf	16	16	...	...	20	30	
*Swift & Co.	120	109	110	110	117½	147¾	
Tenn C & C	15¼	7⅝	16	10⅞	10⅞	11	1
Texas Gulf & S	121½	97½	142	119½	175	175½	10
*Union Carbide	87	85	100¾	78	104⅛	104½	6
*United Dye pfd	67	60	58	58	95	40	
Un Gas Imp	120½	79½	144½	84⅛	106½	108	
U S Gypsum	202	115	166	125	107½	110	
U S Ind Al	97¼	72½	84½	45⅝	80	80¼	5
*U. S. Ind Al pfd	115	102	114⅞	90¼	108¾	109	7
*Va Car 6% w i	...	...	69	31⅝	33	33⅝	6
Will & Baumer	...	...	...	...	16½	...	

ALLIED CHEMICAL FORMS NEW COMPANY

Allied Chemical & Dye Corp., announces formation of Semet-Solvay Engineering Corp., consolidation of the Steere Engineering Co. and the engineering and construction departments of the Semet-Solvay Co., subsidiary of Allied Chemical. The new company brings together two of the most prominent factors in the manufactured gas industry. As a subsidiary of Allied Chemical, its resources are ample for any undertaking.

The Steere Engineering Co., with general offices in Detroit and plant at Owosso, Mich., employing 400, is one of the largest manufacturers and erectors of gas works, tanks and attendant equipment in United States.

Semet-Solvay Co. designed and built the first by-product coke oven installation in America and operates plants in many sections of the United States. Several years ago it started to restrict its activities in the construction of plants for others and concentrated its energies upon the improvement in design of oven and by-product recovery apparatus.

Allied Chemical & Dye Corp., which owns approximately 75 per cent of the stock of Ashland By-products Coke Co., is offering the minority shareholders $100 or par for their holdings. Ashland Company owns a controlling interest in Ironton By-products Co. Both Ashland and Ironton will retain separate identities.

Control of Libbey-Owens Glass Co. has passed to a group of industrial and banking concerns through sale of the holdings of the late Edward D. Libbey. The sale, which is subject to the approval of the Probate Court in Ohio, involves $10,900,000. Purchasers of Libbey-Owens are a group consisting of Semet Solvay Co. of Belgium, represented by its president, William Jansses; Graham Bros., Lehman Bros., and Marshall Field and Glore, Ward & Co. Half of the total purchase price will be in cash and the other half in time payments.

International Nickel Co. has declared a quarterly dividend of 1 1/2 per cent on the preferred, payable Feb. 1 to stockholders of record Jan. 13.

Hilo Varnish Corp., Brooklyn, N. Y., has increased its capitalization from $600,000 to $1,000,000. John H. Schumann is president.

[Industrial Chemicals]

BUTYL ALCOHOL HIGHER; MARKET GENERALLY FIRM

Ammonia Remains Weak—Spot Alkali Business Not Bringing Any Premium Over Contract Prices—Acids Firm with Oxalic Tight—Camphor Lower Due to Competition from Synthetic Material—Cream of Tartar Up Again—Citric Acid Lower—Chlorates, Prussiates and Bichromates Steady but Quiet.

Advanced

Alcohol, Butyl, ¼c lb.
Cream of Tartar, ½c lb.
Tin Bichloride, ¼c lb.
Tin Crystals, ½c lb.
Tin Tetrachloride, ½c lb.

Declined

Acid Citric, 1c lb.

Trend of the Market

	Today	Two Weeks Ago	Last Month	Last Year	War Peak	Pre-War
Acetic Acid, Glacial, c-l....lb	.11⅞	.11⅞	.11⅞	.11½	.19½	...
Sulfuric Acid, Tanks 66° ..ton	15.00	15.00	15.00	14.00	55.00	20.00
Amm. Sulfate c-l NY ....100lbs.	2.50	2.50	2.50	2.95	7.50	2.65
Bleaching Powder, c-l ..100lbs	2.00	2.00	2.00	2.00	9.50	1.50
Copper Sulfate c-l NY....100lbs	4.75	4.75	4.75	4.30	20.00	4.60
Potash Caustic c-l Imp. ....lb	.07½	.07½	.07½	.07½	.87	.08
Soda Ash, 58 p.c. c-l ..100lbs	1.94	1.94	1.94	1.94	3.50	.60
Caustic Soda, 76 p.c. c-l 100lbs	3.66	3.66	3.66	3.66	9.50	1.42
Potassium Bichromate .....lb	.08¼	.08¼	.08¼	.08¼	4.65	.06..
Sodium Prussiate .....lb	.11	.11	.11	.10	1.25	.18
Average	3.012	3.012	3.012	2.913	10.79	2.99.

Current Quotations and Comments on Specific Items, Pages 66-76

Firm conditions continue to prevail in the great majority of industrial chemicals. From the weak side, ammonia is the outstanding item with makers still competing sharply for business due to very large production. One new manufacturer who has a plant ready for production of synthetic ammonia has decided not to enter the market while it is in its present condition. Weakness prevails also in the spot market for soda ash and caustic soda. With all large contracts closed, makers openly admit that it is practically impossible to obtain any premium over the open contract prices for the spot business.

Acetic acid is in increasingly heavy demand due the expansion of lacquer manufacture, and prices are quite firm. Oxalic acid is still in a tight position but prices are unchanged with domestic material available with a few days' delay. Mineral acids are moving routinely at firm unchanged prices with practically all large consumers under contract at prevailing prices.

Denatured alcohol is steady with prices quoted firmly at the advance effective the first of the year. Butyl alcohol has been advanced ¼c lb. by the manufacturer for January deliveries. Makers of lacquer solvents and plasticizers are quite firm in their quotations and further advances are likely. Demand for these products continues to increase. Methanol is still in a strong position, but any further price advances would put the price above the import costs of synthetic material and makers are reluctant to invite this competition.

Copper sulfate maintains its steady course and makers are increasingly firm in their prices following a heavier demand. Barium chloride is available from importers at low prices, but domestic makers continue to report a firm market at unchanged prices. White ammonium chloride is moving in greatly increased volume. One distributor of domestic material reports that contracts thus far closed for 1927 represent a total tonnage one-third in excess of the combined contract and spot sales of 1926. Imported material continues to sell below the domestic product.

Imported technical Epsom salts is still causing serious competition to domestic makers with car lots selling as low as $1.05 100 lbs. Glauber's salts are moving steadily and makers' stocks are said to be greatly reduced. However, competition has shown no abatement and prices remain low. Chlorates are firm in price from both the domestic makers and importers. Prussiates are quiet with practically all large consumers under contract with domestic makers. Bichromates are likewise quiet with large makers covered by contracts.

Domestic camphor prices have been sharply reduced, apparently to recover some of the business lost to imported synthetic material which has been moving at a price sharply below the domestic refiners' material.

LONDON CHEMICALS FIRM

(*Special to* CHEMICAL MARKETS)

London, Jan. 12 (By Radio)—Inquiries for heavy chemicals for future delivery are encouraging and indicate good business coming. Higher prices are asked for sodium prussiate and prussiate of potash. Pigments and coconut oil are firmer, The market is stronger for arsenic.

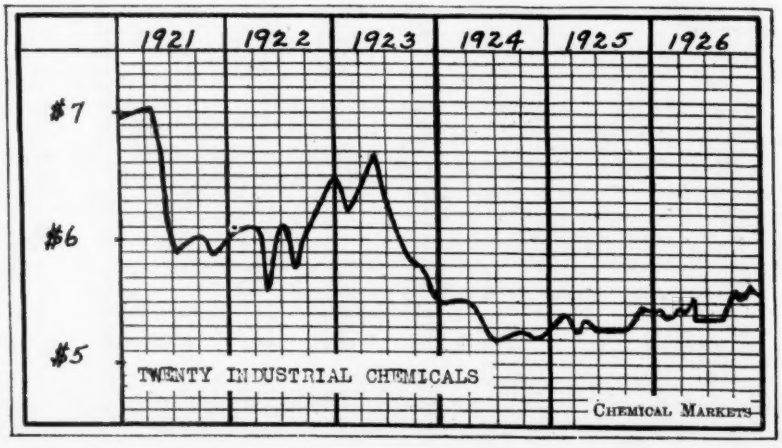
Quotations for antimony are easing slightly. Mercury and sal-ammonia are easier. Carbolic acid crystals are less firm.

Anhydrous ammonia, lead derivatives, turpentine and benzol are lower.

Lump aluminum sulfate for use in water filtering plant will be supplied to Rock Island Arsenal to the amount of 50,000 lbs., at 1.415c by Superior Chemical Co., Joliet, Ill.

Pennsylvania Salt Mfg. Co. will supply 200 tons sulfate of alumina at $28.90, one per cent, ten days, for use of U. S. Engineer, Washington, D. C.

B. T. Babbitt will supply 7,000 lbs. caustic soda, for use of Air Corps, McCook Field, Dayton, O., at 3.5c.



Ethylene Dichloride —a new intermediate

AS A RESULT of increased manufacturing facilities the Carbide and Carbon Chemicals Corporation is pleased to announce a substantial reduction in the price of ethylene dichloride, making it one of the lowest priced organic chlorides available.

These new price levels make the use of ethylene dichloride as a solvent especially attractive and its use as a raw material for further synthesis entirely feasible.

The chlorine is replaceable under conditions of heat and pressure and excellent yields are obtained in most cases. A few typical reactions follow:

Ethylene dichloride and sodium acetate → *Glycol diacetate and sodium chloride*

Ethylene dichloride and ammonia → *Ethylene diamine and ammonium chloride*

Ethylene dichloride and sodium cyanide → *Succinic acid and sodium chloride*

Further details of these syntheses and information about analogous reactions will be promptly furnished by our engineering staff.

CARBIDE AND CARBON CHEMICALS CORPORATION

30 East Forty-second Street, New York, N. Y.

Unit of Union Carbide and Carbon Corporation

[Crudes & Intermediates]

PASSING OF CONTRACT PERIOD FIRMS INTERMEDIATES

Large Consumers Again Removed from the Market for Important Items—Ortho-Toluidine Strong in Price with Advance Likely—Competition Anticipated on Items of Lesser Importance—Benzene Weak in Tone—Toluene Strong—Solvent Naphtha and Xylene Firm but Easy—Phenol Quiet—Naphthalene Firm—Cresylic Acid Unchanged.

Advanced: No advances — Declined: No declines

	Trend of the Market: Today	Two Weeks Ago	Last Month	Last Year	War Peak	Pre-War
Benzene, pure tanks wks.....gal	.23	.24	.24	.23	1.10	.25
Naphthalene flake .....lb	.05	.05	.04½	.06	.16	.03
Phenol Spot .....lb	.18	.18	.18	.22	1.50	.08
Toluene tanks wks .....gal	.35	.35	.35	.35		
Aniline Oil le-l	.15	.15	.15	.16	1.40	.10½
Alpha-naphthylamine .....lb	.35	.35	.35	.35	1.28	—
Benzaldehyde .....lb	.70	.70	.70	.70	—	—
Betanaphthol bbls .....lb	.24	.24	.24	.24	1.50	.08
Dimethylaniline e-l	.32	.32	.32	.31	1.30	.
Paranitroaniline bbls .....lb	.52	.52	.52	.53	1.58	.18
Average	3.09	3.10	3.10	0.315		

Current Quotations and Comments on Specific Items, Pages 1378-1388

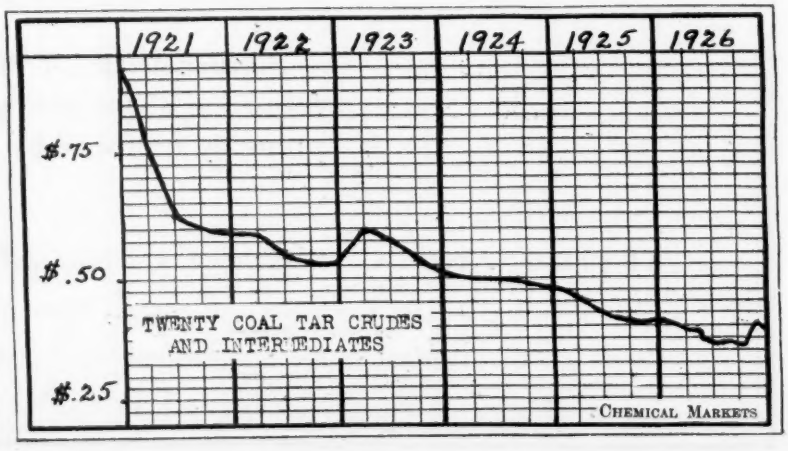
Consumption of benzene remains large, due to the sustained activity of the steel industry and also due to the fact that by-product ovens are continually replacing bee-hive ovens. The gasoline market is consuming decreasing amounts of benzene due the decreased movement of gasoline at this time of the year and also due to the increasing demand for other blends. Benzene prices are holding up fairly well, although the tone of the market is weak. Open quotations are given in some quarters at 24c gal., but in practically all directions sales are being made at 23c gal., and this figure represents the market today. Some weak holders have unloaded material at prices scaling down to 22c gal., but that price is not general. No strengthening of the market appears likely with present production.

Toluene remains the outstanding light oil distillate from point of firmness. Movement is increasing steadily and all makers report sales up to production. Xylene is finding increased favor with lacquer makers due to the short condition of toluene. Prices for xylene are firm and unchanged but supplies are easy. Solvent naphtha is likewise firm in price but easy. Both solvent naphtha and xylene are easily controlled by makers.

Phenol is quiet and steady as to price. Potential production is large and there is no doubt that practically all manufacturers would like to increase their output. Naphthalene is showing increasing activity, as makers are closing contracts for early Spring delivery. Cresylic acid is quiet with no unusual developments reported.

Intermediates are quiet with a great amount of the sharp price competition of the past two months passing with the contract period. Spot business on many important items is slight and probably will not invite price shading. The balance of the market still appears competitive, however, and many factors look for a lower basis during the coming year.

Ortho-toluidine is increasing in use as a flotation reagent and supplies are quite tight. The increasing stocks of para-toluidine with increasing weakness in this market make it appear that higher prices for ortho-toluidine are near. H acid and N & W acid are becoming of slight importance as selling items as practically all the colors made from these intermediates are made by the makers of the intermediates. Para-nitroaniline is steady as to price in all directions. Meta-nitro-para-toluidine is moving in large volume at last week's reduction to $1.70 lb. Gamma acid and ethyl-benzyl-aniline are firm at the moment.



NATIONAL'S NEW DYES

Three new dyes by National Aniline and Chemical Co. include one black and two browns, samples of which for trial are offered the trade this week.

A new product for dyeing wool either as raw stock, yarn or piece-goods is National Superchrome Black T, which possesses excellent solubility, dyes level and has good penetrating qualities, says the announcement. It is an important addition to the National's line of chrome dyes, producing bluer and brighter shades than the well-known National Superchrome Black BN Extra.

An addition to National's line of sulfur browns is National Sulfur Brown R and is of excellent solubility, and good fastness to both washing and light, especially when after-treated with copper. It is recommended for use as a self color or in combination for ginghams and shirtings.

National Alizarol brown RH conc is an important addition to the line of chrome browns, producing a shade of dark reddish cast, and possessing qualities of excellent fastness to washing, milling, perspiration and hot pressing, besides being of good fastness to stoving, carbonizing, and rubbing. This new dye is recommended for loose wool, yarns and piece-goods.

DU PONT

Dyestuffs Intermediates

The purity, uniformity and light color of du Pont Aniline are only partly responsible for the preference which is shown for it by consumers throughout the chemical industries.

No less important is the fact that our unexcelled production and shipping facilities enable us always to deliver the required quantity at the specified time.

E. I. du Pont de Nemours & Co., Inc.
Dyestuffs Department, Sales Division
WILMINGTON DELAWARE

[Oils and Fats]

STRENGTH IN CHINAWOOD FEATURE MARKET THIS WEEK

Conditions in China and Better Demand Responsible for Advance Here and for Futures—Olive Oil Foots Firm and Higher on Spot—Cottonseed Quoted Higher—Linseed Easy and Off—Tallow Higher—Other Animal Oils Off a Shade—English and Japanese Rapeseed Lower.

Advanced

Chinawood Oil, spot bbls., ½c lb.
Chinawood Oil, coast tanks, ¼c lb.
Coconut Oil, Ceylon, spot, ¼c lb.
Coconut Oil, Manila, coast, ¼c lb.
Cottonseed Oil, PSY, spot, ⅛c lb.
Olive Oil Foots, spot, ¼c lb.
Tallow, city extra, ¼c lb.

Declined

Neatsfoot Oil, extra & No. 1, ¼c lb.
Oleo Oil, No. 1 & No. 3, 1c lb.
Oleo Oil No. 2, ½c lb.
Lard Oil, all grades, ¼c lb.
Linseed Oil, spot, 0.3c lb.
Palm Kernal Oil, spot, ¼c lb.
Rapeseed Oil, Jap., spot, 2c gal.
Stearine Oleo, spot, 1c lb.

Trend of the Market

	Today	Two Weeks Ago	Last Month	Last Year	War Peak	Pre-War
Cod Oil NY .....gal	.65	.65	.65	.69	1.20	.26½
Degras American bbl .....lb	.04¼	.04¼	.04¼	.04¼	.23	.03⅛
Lard No. 1.....gal	.73	.73½	.82¾	.91	2.90	.92
Menhaden, crude tanks .....gal	.47½	.47½	.47½	.55	1.20	.33
Neatsfoot 20° ct .....gal	1.10¼	1.10¼	1.17¼	1.27½	8.45	.95
Red Oil distilled .....lb	.10	.10	.10	.11¾	.17	.07
Stearic Acid, T. P. .....lb	.15¼	.15¼	.15¼	.18	.38	.12
Coconut Ceylon tanks .....lb	.08	.08	.08¾	.11	.30	.14
Cottonseed crude tanks.....lb	.06¼	.06⅝	.06½	.09⅛	.25	.08
Linseed crude c-l bbls.....gal	.77¼	.81⅝	.82½	.89¼	1.85	.57
Olive, denatured .....gal	1.40	1.38	1.40	1.25	4.50	1.05
Peanut refined .....lb	.14¼	.14¾	.14¾	.15	.30	.08
Soya Bean bbls.....lb	.12	.12	.12¼	.13¼	.19¼	.07
Average	4.85	4.85	4.87	4.92	5.92	1.5

Current Quotations and Comments on Specific Items, Page 76-78

The first week of the new year has not revealed any great rush of orders in the fatty oil field. In fact, the increase in business, if any, has been very slight. However, the market in general seems to show a better tone than during the closing weeks of last year. With the exception of linseed oil, the few reductions were fractional and brought about by local conditions rather than any underlying weakness.

All positions of Chinawood oil are higher, due to the political conditions in China and a better demand for spot and future parcels. Prices here and on the Coast advanced ½c lb. over the week and the undertone was firmer. Since the advance in castor oil at the close of last year, sales have continued in good volume with makers having no trouble in maintaining the scheduled price. In some quarters a firmer tone is noted in Ceylon and Manila coconut oils. This oil has been dull and easy throughout the Fall on a routine movement, but the trend at the moment is upward. Prime summer yellow cottonseed oil advances have been fractional with the passing of the weeks, but factors here are not confident that the local market will continue to show further strength. Olive oil foots, for weeks the firmest item of all, is still quite firm on spot and sales are being made at levels ¼c above last week's level. The shipment quotations are coming forward at lower figures but this has not affected the firm spot position as yet. Makers of stearic acid and red oil have continued to take orders in good volume over the turn of the year almost without abatement.

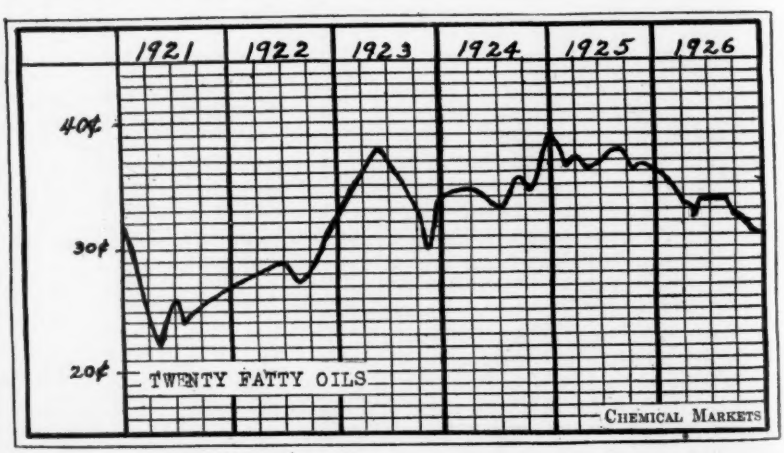
Among the declines, linseed oil is most prominent. Crushers now quote openly, prices which were considered inside ten days ago, and the present inside price has declined accordingly. Varnish makers continue their cautious buying policy on the declining market and this has not helped the tone of the market. Excepting city extra tallow, reductions are noted in all animal fats, particularly in oleo oil, which is from ½c to 1c lb. lower on the various grades. On the routine inquiry Japanese and English rapeseed oil on spot are both off 2c gal. Crude corn oil at the mills is also off fractionally.

USES OF CASHEW NUT OIL

Non-drying oil from cashew nuts is oxidised in the presence of acid to form more or less saturated drying products. The reaction may be performed with the aid of nitric acid, hydrochloric acid, manganese dioxide, sulfuric acid, potassium dichromate, or with mixtures of these materials; or nitrate or sulfate radicles, sulfur or chlorine may be employed instead of oxygen radicles to produce partial or full saturation. The fully saturated products, of a gum-like nature, may be dissolved in solvents such as amyl acetate, benzine, gasoline, turpentine, alcohol, naphtha, kerosine, to form varnishes, or insulating or waterproofing media.

Partially saturated products may be used in marine paints or for making adhesive tapes. The oil may be condensed by heating it to 100-200 deg. C., preferably in presence of an acid or alkali catalyst, or by heating it with an aldehyde such as formaldehyde, or with hexamethylene-tetramine. The condensation may be stopped at any stage as the product changes from liquid to solid.

The liquid may be used for lacquers, or applied to fabrics, or mixed with fillers and further condensed to a desired hardness. For the production of moulded articles oil and an aldehyde are heated together, with or without catalytic hydrochloric acid, to 100-200 deg. C



U.S. INDUSTRIAL ALCOHOL CO.
110 EAST 42ND STREET
NEW YORK

WHY WE TRADE-MARK OUR PRODUCTS

An Open Letter:

A short time ago we made a change in one of our trade-marks. By making it easier to distinguish our name we feel we improved it.

For every package that leaves our plants bears our trade-mark. Not as an advertisement, but because we feel that the materials we make and sell have individual identity - just as do automobiles and other fine products of whose quality their makers are proud.

To determine a regular source of supply for uniform, high-quality materials at reasonable prices is your aim. To get new users and to keep them satisfied with quality, service and price is ours.

That's why we want every buyer to know: who made the chemicals he ordered - where he can lay the blame if they are not right - and where he can order more if they prove especially satisfactory.

We regard our trade-marks as our personal signature-written symbols of our whole-hearted backing for, and belief in, our products.

Yours truly,

U. S. Industrial Alcohol Co.

U.S. INDUSTRIAL ALCOHOL CO.

U.S. INDUSTRIAL CHEMICAL CO.

PYRO BRAND ALCOHOL U.S. Industrial Alcohol Co.

THREE trade-marks that carry the backing of enormous resources—reliable standards of manufacture—every facility for efficient production and distribution.

[Agricultural Chemicals]

INQUIRY FOR NITRATE OF SODA ON THE INCREASE

Little Actual Business Placed—Consumers Showing a Better Interest—Production Figures for December Show Poor Comparison with Previous Year—South American Blood Lower—Sulfate of Ammonia and Tankage Unchanged—Insecticides Moving Well on a Strong Market.

Advanced: No advances — Declined: Blood, So. Amer., 15c unit

	bToday	Two Weeks Ago	Last Month	Last Year	War Peak	Pre-War
Acid Sulfuric 66°.....ton	$15.00	$15.00	$15.00	$14.00	$55.00	$20.00
Amm. Sulfate 100lbs	2.50	2.50	2.50	2.95	1.75	2.65
Arsenic 100lbs	3.50	3.50	3.50	3.00	18.00	4.00
Copper Sulfatec-1.....100lbs	4.75	4.75	4.75	4.45	20.00	4.60
Paris Green	.19	.19	.19	.19	.50	.11
Potash Muriate 80%.....ton	35.40	36.00	34.60	34.90	....	....
Potash Sulfate 90% .....ton	47.30	46.85	45.85	45.85	440.00	48.07
Phosphate Acid 16% .....ton	10.00	10.00	10.00	10.00	11.00	3.00
Phosphate Rock 68% .....ton	3.00	3.00	3.00	2.75	2.65	3.00
Sodium Nitrate 100lbs	2.60	2.54	2.46	2.63	5.00	1.90
Average	12.524	12.433	12.143	11.785	103.50	13.84

Current Quotations and Comments on Specific Items, Pages 66-80

On a generally quiet market a reduction in the c.i.f. price of dried South American blood was the only change in the fertilizer position last week. Some weeks previous the price had been advanced and the present decline can best be attributed to the desire of sellers to dispose of stocks on the routine market. Blood continues easy on the New York market and there has been no change in the Chicago quotations.

Nitrate of soda is coming in for more attention from the consumers and though actual business has not increased the volume of inquiry over the past week will probably lead to the consummation of increased business shortly. In any event, importers are unwilling to shade the schedule price. Shipments of nitrate from the West Coast during December were as follows: Europe, 51,000 tons; U. S. Atlantic coast, 25,000 tons; U. S. Pacific coast, 5,000 tons; Japan, 7,000 tons; Hawaii, 6,700 tons, and Argentina, 200 tons. Production for December totaled 85,371 tons as compared to 240,345 tons in December, 1925.

Otherwise there was no change in the position of any of the items. Sulfate of ammonia is steady and only moderately active; tankage is quiet and in small demand at a season when mixers should be showing an active interest in making purchases; fish scrap is nominal and with the season over is practically a dead issue until the opening of a new season. Imported bone meal is steady at the quoted level, with sellers of high-grade parcels unwilling to meet the bottom market figures.

Insecticides are in the midst of a season which is expected to be fully up to that of last year. There is no evidence of price shading for business in this section of the country and while a good portion of future business has been taken care of there is still some not accounted for and sales on the open market are also progressing at a good rate. Lime sulfur solution and bordeaux mixture are moving best at this writing.

Muscle Shoals electric plants report net operating revenue during 1926 amounting to $859,210.

CALCIUM ARSENATE

Calcium arsenate production for year ended June 30, 1926, at 28 plants, was 5,363,320 pounds compared with 19,911,262 pounds in 1925; lead arsenate 16,898,214 pounds, compared with 13,865,482 pounds in 1925; paris green 2,863,691 pounds, compared with 3,544,887 pounds, in 1925. Based on the returns collected at the biennial censuses for 1923 and 1925, the companies reporting represent approximately two-thirds of the industry.

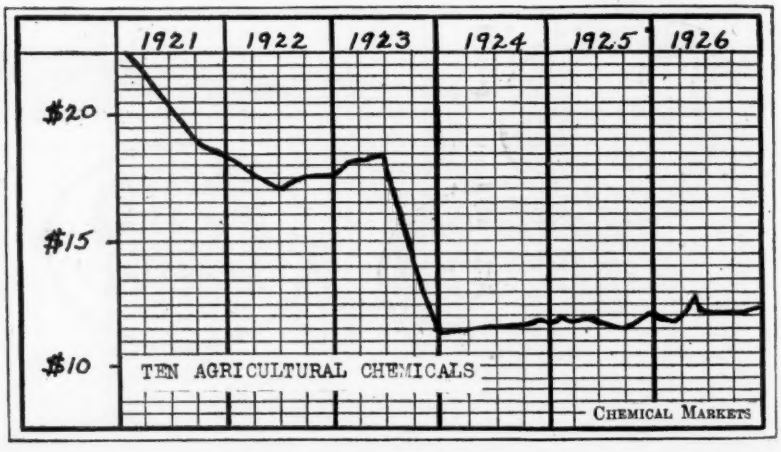
GRASSELLI PLANT FOOD

"Plant Food" is the name of a new odorless fertilizer, just placed on the market by Grasselli Chemical Co. It is described as the only plant food that is entirely odorless, and contains highly concentrated food units in a properly balanced ratio. It may be used for lawns, shrubs, gardens and house plants, and is packed in 25, 50 and 100 lb cloth bags, paper lined. The guaranteed analysis follows: Nitrogen, 4.12%; equivalent to ammonia, 5.00%; available phosphoric acid, 13.00% and potash (K_2O), 4.00%; ammonia from mineral water.

Fertilizer interests met in Washington last week, to draw up a code of ethics. New York's representative was J. K. Welch, of H. J. Baker & Bro.

German Potash Syndicate's home and export sales in 1926 foot up 1,099,700 metric tons of pure potash against 1,255,500 in 1925.

Chemical Service Corp., formerly of Brooklyn, is now located at 136 Liberty st., New York, telephones Rector 1938-1939.



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We Offer

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Ammonia, Anhydrous
Ammonia, Aqua
Ammonium Chloride
Barium Carbonate
Barium Chloride
Case Hardening Compounds
Copper Carbonate
Copper Sulphate
Cresylic Acid
Cyanide, Aero Brand
Cyanide, Copper
Cyanide, Potassium
Cyanide, Silver
Cyanide, Sodium
Cyanide, Zinc
Dicyandiamid
Diortho-Tolylguanidine
Diphenylguanidine
Formic Acid
Hydrocyanic Acid, Liquid
Lead Acetate
Ortho Toluidine
Potassium Carbonate
Potassium Prussiate, Red
Potassium Prussiate, Yellow
Sodium Prussiate, Yellow
Sodium Sulphide
Sulphocyanides
Sulphuric Acid
Thiocarbanilide
Thiourea
Urea
Xanthates, Sodium & Potassium
Zinc Dust, "Asarco" Brand
Zinc Sheets
Zinc Sulphate, "Asarco" Brand

American Cyanamid Co.

511 Fifth Avenue

NEW YORK

AMERICAN CYANAMID COMPANY PRODUCTS — AERO BRAND

[Industrial Raw Materials]

TURPENTINE HIGHER THIS WEEK, EXPECTED TO DECLINE

Reports of London Failure Causes Easier Market at Source—Rosins Higher on Spot but Quiet and Steady at Savannah—Antimony Advances Here on Higher Replacements—Egg Albumen Continues Easy—Egg Yolk, Japan and Carnauba Waxes All Very Firm.

Advanced		Declined	
Antimony, spot, metal, 1¼c lb.	Rosin, I, 40c 280 lbs.	Albumen, egg, edible, 1c lb.	
Rosin, B, 50c 280 lbs.	Rosin, WG, 15c 280 lbs.	Starch, pearl & powd., dom., 20c 100 lbs.	
Rosin, D, F, G, H, 55c 280 lbs.	Rosin WW, 20c 280 lbs.		
Rosin E, K, M, N, 25c 280 lbs.	Turpentine, spot, 1½c gal.		

Current Quotations and Comments on Specific Items, Pages 78-80

At a time when the local turpentine market is showing signs of recovery comes a report from the primary market that a large export house in London has suspended, involving some 44,000 barrels, which will cause some unsteadiness. It is hoped that large interests will absorb these stocks and prevent any serious decline in price. Locally the rosin market presents a firm tone and shows fairly good advances for the week, although buying has not taken place in any great volume. Advices from Savannah indicate a slight decline in prices for a short time. Antimony, which has been in a very weak state for months, has advanced rather sharply during the week, principally because of the Chinese political situation. The uncertainty of the future position and an improved demand coming at one time have served to advance the market.

Carnauba and Japan waxes continue in the limelight as firm items and the spot position is unchanged. February arrivals of Japan wax are at a level considerably under the spot market. Arrivals of carnauba are noted in the manifests, but these parcels are all committed on contracts and the amount available outside of contracts is still negligible. Tanning materials continue to attract some attention by the strength in divi divi, valonia and wattle bark, but the actual sales have not been large, partially because of limited offerings and also because consumers have not anticipated their requirements for the next few months as yet.

Domestic makers of corn starch announced a 20c per 100 lbs. reduction in pearl and powdered starch for the year, but have abolished the 20c per 100 lbs. discount which prevailed last season, so in reality prices are the same. Egg albumen continues weak and in spite of a fair demand is again quoted lower Egg yolk is in very small supply here and the position is fully as firm as for the past two months.

(*Special to* CHEMICAL MARKETS)

Savannah, Ga., Jan. 10.—Turpentine closed last week dull at 80½c gal. and is in a "nothing doing" state. This price represents an advance from the previous week's close of 77½c gal. Reports from London to the effect that a large exporter has suspended, involving about 40,000 barrels, has had a depressing effect on the market. Had this occurred in October last the position would probably have been weakened considerably, but it is believed here that other factors will take a hand and hold the abovementioned stocks to prevent a serious decline. Receipts last week were 952 bbls.; sales reported, 255 bbls.; shipments, 759 bbls., and stocks, 12,665 bbls.

Rosins also seemed to be limited as to demand and closed steady on Saturday with sales of 350 bbls. One buyer was the only concern bidding. Immediate indications point to a slight decline on medium and common grades, although the reduction is not likely to be great. However, with very small receipts between now and April, prices are expected to show material advances by that time. Receipts last week were 4,614 bbls.; sales, 2,571 bbls.; shipments, 2,197 bbls., and stocks, 86,209 bbls. Current quotations are: B, $10.50; D, $10.75; E, $11.05; F, G, H, $11.30; I, $11.45; K, $13.50; M, $13.75; N, $14.25; WG, $15.25, and WW, $17.00.

Procter & Gamble Co. has purchased the Rub-No-More Soap Co., Fort Wayne, Ind. Colonel William Cooper Procter announced that the Fort Wayne plant would be closed immediately, but that manufacture of the soap would be continued in Kansas City plant.

HAMBURG CHEMICAL MARKET IS QUIET

(*Special to* CHEMICAL MARKETS)

Hamburg, Germany, Jan. 3. (By Mail)—Changes in prices have been very limited owing to the dull period at close of the year, but revival in trade is expected this month. Epsom salts, glauber salts and sodium sulfide are in fair demand. Glycerin is showing a downward trend, British competition having reappeared. Prices are f.o.b. Hamburg; those quoted in pounds Sterling per 1,000 kilos, and those quoted in dollars are per 100 kilos:

Caustic potash, $12.50; caustic soda 125-128, £12 17s 6d; potash alum granular in large containers, £6 9s; hyposulphite of soda commercial cryst, £6 12s 6d; barium carbonate $2.85; barium chloride, $3.65; epsom salts techn., £1 13s 6d; borax powd. or cryst, £20; potassium bromide, $67.; sodium bromide, $70.; calcium chloride, £3 5s; chlorate of potash, $11.20; copperas without packing, £2 17s 6d; glauber salts small cryst, 98c; potash saltpeter, £22 10s; lithopone red seal, $8.75; sal ammoniac white gran. 98-100%, $8.45; sodium sulfide 60-62% fused, £8 10s.

MID-WEST ACID OUTLOOK

Business in acids and chemicals in the Mid-West will compare favorably with the first quarter last year, say reports received by the Mid-West Shippers Advisory Board, meeting in Chicago. Bulk acids moving in tank cars show a very healthy increase and indications are that this will continue at least for the next three months, and manufacturers are optimistic as to the entire year. Chemicals are moving freely and predictions are for a business equal to that of 1926.

Archer-Daniels-Midland Co. says: "Although it is still too early to determine the final outturn of last year's Argentine crop of flaxseed, it appears now as if the government estimate of a total crop of 76,000,000 bushels, or an exportable surplus of about 69,000,000 bushels, will be close to the actual figures.

J. W. Daniels, of Archer-Daniels-Midland Co., is making a two-months trip of South America. Thomas Daniels, son of J. W. Daniels, is in the diplomatic service at Rio de Janeiro, Brazil.

Klipstein Chemicals

RAW MATERIALS
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GUMS

Thorough Chemical Coverage for those Industries devoted to

TEXTILES PAPER RUBBER
VARNISH GLASSWARE SOAP
LEATHER CERAMIC PAINT
DYEING *and* BLEACHING
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Prices Current

Heavy Chemicals, Coal-tar Products, Dye-and-tanstuffs, Colors and Pigments, Fillers and Sizes, Fertilizer and Insecticide Materials, Naval Stores, Fatty Oils, etc.

Chemical prices quoted herein are those of American manufacturers for goods, spot New York, f. o. b., or ex-store, for immediate shipment, unless otherwise specified. Industrial chemical products sold principally on a basis of f. o. b. works are specified as such. Quotations on imported chemicals are so designated. Resale stocks sufficient to be a factor in the market, are quoted in addition to makers' prices and are indicated as "second hands."

Oils and fats are quoted spot New York, or ex-dock. Quotations on products sold f. o. b. mills, or spot Pacific Coast are so designated.

Industrial raw materials are quoted spot New York, f. o. b., or ex-dock. Materials sold f. o. b. works or delivered at various sections of the country are so designated.

The range of prices given is not "bid and asked," but indicates quotations from different sellers, based on varying grades or quantities or both. Containers named are the original packages most commonly used in the New York market.

Acetaldehyde
Acid Laurent's

Chemicals

Acid Metanilic
Alcohol Ethyl Denatured

Acetaldehyde drs, or cyl. c-l wks	lb	...	.22
le-l wks	lb	.24	.26
ACETANILID, tech 150 lb bbls	lb	.20	.21
100 lb kegs	lb	.22	.23
Acetic, Anhydride			
85% 100 lb cbys	lb	.27	.30
92-95% 100 lb cbys	lb	.29	.35
Acetic Ether, see Ethyl Acetate			
Acetine, 50gal drums	lb	.37	.40
Acetone, CP, 700 lb drs c-l wks	lb	...	.12
Tank cars, wks	lb	...	.12
700 lb drs., le-l wks	lb	.13	.13½
350 lb drs le-l wks	lb	...	.14
Acetone Oil light drs N. Y.	gal	1.65	1.75
Heavy, drs N. Y.	gal	1.65	1.75
Acetyl Chloride, 100 lb cbys	lb	.42	.45
Acetylentetrabromide	lb	...	1.50
ACID, Acetic, 28% 400 lb bbls c-l wks	100 lb	...	3.38
56% c-l wks	100 lb	...	6.34
70% bbls c-l wks	100 lb	...	7.82
80% com'l bbls c-l wks	100 lb	...	8.77
80% pure bbls c-l wks	100 lb	...	9.75
Glacial bbls c-l wks	100 lb	...	11.92
Glacial, USP, cby wks	100 lb	...	12.65
Le-l 25c 100 lbs differential			
Anthranilic, tech., drs	lb	...	.80
99-100% 100 lb drs	lb	.98	1.00
Benzoic, tech., 100 lb bbls	lb	.57	.60
Boric crys., powd., 250 lb bbls	lb	.08½	.11
Kegs 100 lb	lb	.09½	.12
Carbolic, crys., see Phenol			
Crude 35% 50gal bbls	gal	.31	.33
10% 50gal bbls	gal	.25	.28
Carbonic, see Carbon Dioxide			
Chloracetic			
Mono 100 lb bbls wks	lb	...	.25
Di, 150 lb cbys wks	lb	...	1.00
Chlorosulfonic 1500 lb drs wks	lb	.15	.16
Chromic 98% 400 lb drums	lb	.37	.40
Chromotropic, 300 lb bbls	lb	1.00	1.06
Citric, USP, cryst 230 lb bbls	lb	.43	.43½
Powd, USP, 200 lb bbls	lb	.44	.44½
Imported, crys, 112 lb kegs	lb	.43	.43½
Cleve's 250 lb bbls	lb	.95	.97
Cresylic, 95% dark drs NY	gal	.57	.60
97-99% pale NY	gal	.60	.65
Formic, 85% tech., 140 cbys	lb	.10	.10½
90% 90 lb cbys incl	lb	.10½	.11
Gamma, 225 lb bbls wks	lb	1.00	1.06
H 225 lb bbls wks	lb	.57	.63
Hydrobromic, 48% com'l 155 lb cbys wks	lb	.45	.48
Hydrochloric, see Acid Muriatic			
Hydrocyanic, wks cyl	lb	.80	.90
HYDROFLUORIC, 30% 400 lb bbls wks	lb	...	.08
30% 100 lb cbys wks	lb	...	.08
48% single 100 lb cbys wks	lb	...	.10
52% 100 lb cby., wks	lb	...	.12
52% 100 lb cbys wks	lb	...	.11
60% 100 lb cby wks	lb	...	.14
60% 300 lb dr wks	lb	...	.13
White Acid, 100 lb cby wks	lb	.25	.26
Hydrofluosilicic, 35% 450 lb bbls wks	lb	...	.11
J kegs wks	lb	...	3.00
LACTIC, 22% dark 500 lb bbls	lb	.05½	.06
22% light bbls	lb	.06½	.07
44% dark bbls	lb	.11	.12
44% light bbls	lb	.13	.13½
Laurent's 250 lb bbls	lb	.52	.54
Tank Cars	gal	...	.33½

Acetone—Market remains firm as all production finds a ready outlet in domestic and exports channels.

Acetic Anhydride—Market is fairly steady at the moment although some sharp price competition is reported over the past month.

Acid Acetic—Market remains in a strong position due to the steadily increasing demand and all makers are firm in price.

Acid Cresylic—In quiet routine demand with leading factors quoting unchanged prices.

Acid Formic—Movement is good but supplies are plentiful and condition of market is easy.

Acid Gamma—Demand is slight but all makers are firm in their prices.

Acid Muriatic—Makers report a firm market with all large contract business closed.

Acid Nitric—Pursues steady course without important developments.

Acid Oxalic—Market remains tight with domestic material obtainable within a few days at unchanged prices of 10¾c@11¼c lb. The inside price is applicable only to old accounts.

Acid Phosphoric—Market is strong with U. S. P. syrupy quoted higher at 20c lb.

Acid Citric—Domestic makers have lowered prices and quote 43c @ 43 1/2c lb for barrels of crystals and 44c @ 44 1/2c lb for powdered.

Acid Sulfuric—Market is quiet with all large consumers under contract at firm prices.

Alcohol Butyl—Maker has advanced prices ¼c lb for January delivery and quotes on contract, tanks 18¾c lb, carlots of drums

ACID, HYDROFLUORIC (Cont'd)			
ACID, Metanilic, 250 lb bbls	lb	.60	.65
Mixed, Sulfuric-nitric			
Drums, wks	N Unit	.07¾	.08
Drums, wks	S Unit	.01	.01½
Tank cars, wks	N Unit	.06	.06½
Tank cars wks	S Unit	.008	.01
Monosulfonic F Delta 50 lb tins	lb	...	1.65
MURIATIC, 20° cbys wks 100 lb		1.70	1.80
cbys c-l wks	100 lb	...	1.45
Tank cars wks	100 lb	...	1.05
18° 120 lb cbys c-l wks	100 lb	...	1.35
Tank cars, wks	net ton	...	.95
Naphthionic tech, 250 lb bbls	lb	.55	.59
N. & W. 250 lb bbls	lb	.95	.99
NITRIC 36° 135 lb			
Cbys c-l wks	100 lb	...	5.00
40° cbys c-l wks	100 lb	...	6.00
42° cbys c-l wks	100 lb	...	6.50
Le-l 25c 100 lbs, differential			
CP, cbys single wks	100 lb	.12	.13
Oxalic, 300 lb bbls wks N. Y.	lb	.11	.11¼
Imp., 560 lb casks	lb	.11½	.12
Phosphoric, 50% 150 lb cbys	lb	.07	.07½
Syrupy USP, 70 lb drums	lb	.19	.20
Demis	lb	.20	.21
Imported	lb	.19	.20
Phthalic, See Phthalic Anhydride			
Picramic, 300 lb bbls	lb	...	.50
Picric, 450 lb bbls c-l	lb	.30	.33
Pyrogallic tech 200 lb bbls	lb	...	.86
S kegs	lb	...	2.50
Salicylic tech., 125 lb bbls	lb	.27	.32
Sulfanilic, 250 lb bbls	lb	.15	.16
SULFURIC, 66° 180 lb cbys			
le-l wks	100 lb	1.60	1.95
Cbys c-l wks	100 lb	...	1.35
1,500 lb drums wks	100 lb	...	1.20
Drums c-l wks	100 lb	...	1.00
Tank cars, wks	net ton	...	15.00
60° 1,500 lb drums wks	100 lb	...	1.10
Drums c-l wks	100 lb	...	.87½
Tank cars, wks	net ton	...	10.50
C.P. 175 lb cbys	100 lb	.07	.08
Oleum 20 pc 1500 lb drums le-l wks	100 lb	...	1.50
Drums c-l wks	100 lb	...	1.25
Tank cars, wks	net ton	18.00	19.00
Oleum 40% drs le-l wks	net ton	...	42.00
Oleum 60% drs wks	net ton	62.00	72.00
Tannic, tech., 300 lb bbls	lb	.30	.40
Tartaric, USP, cryst powd 300 lb bbls	lb	...	.29½
Imp., USP., 240 lb bbls	lb	.27½	.28
Tobias, 250 lb bbls	lb	...	.85
Tungstic, 100 lb kegs	lb	...	1.00
ALCOHOL, amyl See Fusel Oil			
Butyl Normal 50gal drs wks c-l	lb	.19¾	.20¼
Drums le-l wks	lb	.19¾	.20¾
Tanks cars wks	lb	.18¾	.19¾
Butyl Tertiary 50gal drums	gal	.50	.54
Diacetone, 50gal drs del.	gal	1.70	1.90
Ethyl, USP 190pf 50gal tbls	gal	...	3.70
Anhydrous, drums	gal	.50	.55
Denatured			
50gal bbl incl	gal	...	.46½
Carlots	gal	...	.44½
50gal drums extra	gal	...	.37½
Tank Cars	gal	...	.35½

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ALCOHOL, Ethyl, Denatured			
No. 1 Special denat. 190pf			
50gal bbl incl	gal	...	.46½
Carlots	gal	...	.44½
50gal drums extra	gal	...	.37½
Tank cars	gal	...	.35½
No. 5 Complete denat. 188pf			
50gal bbl incl	gal	...	.44
Carlots	gal	...	.42
50gal drums extra	gal	...	.35
Tank cars	gal	...	.33
Isopropyl, refined, 90-91% 50 gal drs	gal	1.00	1.25
Propyl anl., 50gal drs	lb	...	1.00
Ref'd. 98-99% drs	gal	1.25	1.50
Aldehyde Ammonia, 100gal drums	lb	.80	.82
Alpha-Naphthol crude 300lb bbls	lb	...	.65
Refined	lb	.85	.90
Alpha-Naphthylamine, 350lb bbls	lb	.35	.37
ALUM, Ammonia, lump 400lb bbls wks lc-l	100lb	3.15	3.50
Ground 400lb bbls wks	100lb	3.25	3.65
Powd. 380lb bbls wks	100lb	3.65	3.90
Chrome, 500lb csk., wks	lb	5.25	5.50
Potash, lump, 400lb wks.	100lb	3.50	3.75
Bbls c-l wks	100lb	3.35	3.40
Imported lump	100lb	...	3.25
Ground 400lb bbls wks	100lb	3.50	3.85
Imp., 350 casks	100lb	2.65	3.00
Powd., 380lbs bbls wks	100lb	3.50	4.00
Chrome, 500lb casks wks	100lb	5.25	5.50
Soda Grd., 400lb bbls wks	100lb	...	3.75
Bbls., c-l wks	100lb	...	3.50
Aluminum metal, c-l NY	100lb	...	27.00
Chloride, anhyd 275lb drs	lb	.35	.40
Crystals, 375lb bbls	lb	...	.06½
30% sol., 120lb cbys	lb	...	.08
Hydrate 96% light 90lb bbls	lb	.17	.18
Hvy., 62-64% 220 bgs	lb	.06	.06½
400lb bbls wks	lb	.06½	.07
Stearate, 100lb bbls	lb	.23	.24
SULFATE, Iron-free bags c-l wks	100lb	...	1.75
Bbls c-l wks	100lb	...	1.90
Imported, spot	100lb	1.60	1.65
Com'l. bags c-l wks	100lb	1.35	1.40
Bbls c-l wks	100lb	...	1.55
Amidol (See Diaminophenol)			
Aminoazobenzene, 110lb kegs	lb	...	1.15
AMMONIA, anhyd. 100lb cyl	lb.	.11	.12½
Water, 26° 800lb drs del	lb	...	.03
Drs., c-l delivered	lb.	...	.02¾
Tanks	lb	.02¼	.02½
CP cbys	lb	...	.12
Acetate, 100lb kegs	lb.	...	.34
Bifluoride, 300lb bbls	lb	.21	.22
100lb kegs	lb	.22	.23
Bromide, 450lb bbls 50lb bxs	lb	...	.55
Imported, 112lb boxes	lb	.48	.50
Carb. tech., 500lb cases	lb	.08¾	.09
Powd., tech., 350lb cks	lb	.07¼	.07¾
USP, lump 100lb kegs	lb	.11	.11½
Powd. 100lb kegs	lb	.13	.13½
Chloride White 250lb bbls wks	lb	.06½	.06¾
250lb bbls c-l wks	lb	...	.06
Imp. white 600lb cks	lb	...	.05½
C.P. USP, gran bbls	lb	.13	.13½
Gray, 250lb bbls wks	lb	.07	.07½
Bbls., c-l wks	lb	...	.07
Imp. gray 550lb csks	lb	.06	.06¼
Lump, 500lb casks spot	lb	.11	.11¼
Lactate, 500lb bbls	lb	.15	.16
Refined Crystals bbls	lb	...	.20
Oxalate, pure 100lb kegs	lb	.35	.37
Persulfate, 112 kegs	lb	.27½	.30
Phosphate, dibasic 200lb bbls	lb	...	.38
Tech., powdered 325lb bbls	lb	...	.18
Mono, 325lb bbls	lb	.12	.12½
Sulfate bulk c-l	100lb	...	2.50
Southern points	100lb	...	2.50
Imp., 200 dbl bgs fas	100lb	...	2.50
Sulfocyanide tech., 100lb kgs	lb	.40	.45
Amyl-Acetate, tech., 50gal drs	gal	...	2.25
Refined 50gal drums	gal	2.40	2.50
Alcohol, see Fusel Oil			
ANILINE OIL, 960lb drums	lb	.15	.16
Salt 200lb bbls	lb	...	.24
Anthracene, 80-85% 600lb casks wks	lb	.60	.65
Anthraquinone, sub 125lb bbls	lb	.90	1.00
Antimony metal slabs tons lots	lb	.12¼	.12½
Needle powd 100lb cs	lb	.14	.15½

19¼c lb, 1/c/1 drums 19¾c lb. Spot prices remain 1c lb above contract prices.

Alcohol Denatured—Market is steady with only slight shading in some directions. Prices are quoted at the 2c gal. advance effective Jan. 1.

Ammonia Anhydrous—Market remains in sharply competitive condition with production greatly in excess of consumption and more synthetic plants scheduled to come into operation during this year.

Ammonia Aqua—In weak condition due to large production. Schedule is unchanged.

Aniline Oil—With the contract business practically all closed, makers are quite firm in their prices of 14¾c lb for tanks, 15c lb for carlots of drums, and 16c lb for single drums.

Ammonium Chloride—One seller of white domestic material reports that contract business closed for this year is one-third greater than the combined contract and spot sales of 1926. Prices are firm and unchanged from both domestic factors and importers.

Arsenic—Demand is slight and offerings are plentiful.

Barium Chloride—Imported material remains available at $61.00@$62.00 ton, while domestic makers report firmer conditions.

Benzene—Weak conditions continue in this market. Offerings are plentiful in practically all directions at 23c gal. for tanks at works, although some distributers name an open price of 24c gal. Occasionally as low as 22c gal. has been done. Production is large.

Beta-Naphthol—In steady demand at firm unchanged prices.

Bleach—In demand commensurate with production at unchanged prices.

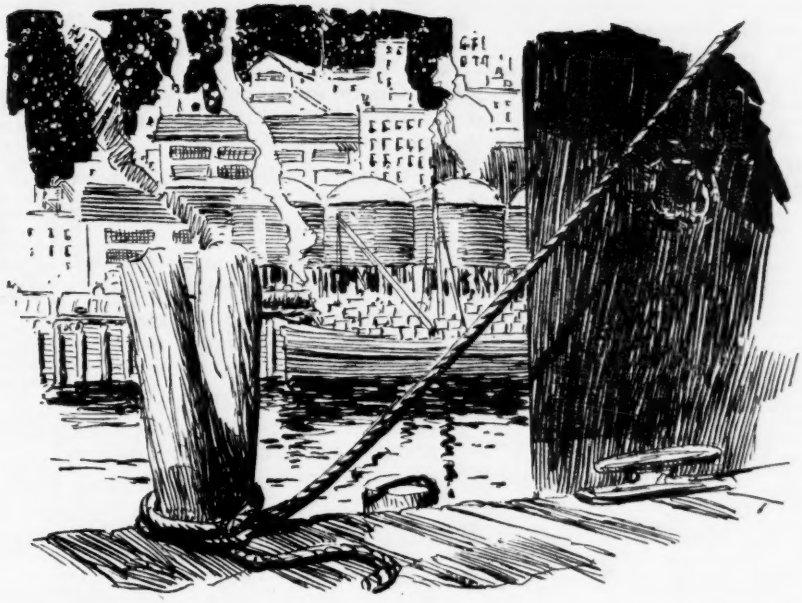
Calcium Acetate—Market is very strong owing to steadily increasing demand for acetic acid.

Camphor—Domestic refiners have reduced prices 7c lb and now name 72c lb for barrels.

Carbon Tetrachloride—All makers are adhering strictly to schedule prices which show no variation.

Chlorine—Makers are well in control of the market and prices are firm and unchanged.

ANTIMONY CHLORIDE, anhyd 1000lb drs	lb	.16	.17
50lb crocks	lb	.45	.48
Sol'n 130lb carboys 48°	lb	...	.17
Oxide, 500lb bbls	lb	.16¼	.17
Sulfuric golden, 250lb bbls	lb	.15	.16
Crimson 250lb bbls	lb	.25	.27
Vermilion, 250lb bbls	lb	...	.37½
Tartrolactate, 500lb bbls	lb	...	.45
Arsenic metal 220lb kegs	lb	.45	.50
Red, 224 kegs cases	lb	.10½	.11
White, .112lb cases NY	lb	.03¾	.03½
BARIUM BINOXIDE, see Barium dioxide			
Carbonate 300lb bbls wks	ton	50.00	52.00
200lb bgs wks	ton	47.50	50.00
Imports, casks NY	ton	47.00	48.00
Chlorate, 112lb kegs NY	lb	.12	.12¼
Chloride, 800lb bbls wks	ton	65.00	67.00
200lb bags wks	ton	61.00	63.00
Imports spot	ton	63.00	64.00
Dioxide, 88% 690lb drs	lb	.13	.13½
Import, 86-88% 400lb drs	lb	.13	.13½
Hydrate, 500lb bbls	lb	.04¾	.04¾
Nitrate, 700lb csks	lb	.07½	.08
Sulfocyanide 600lb bbls	lb	.27	.28
Barytes, floated 350lb bbls wks	ton	23.00	24.00
Imported	ton	29.00	33.00
Benzaldehyde tech. 945lb drs wks	lb	.65	.70
BENZENE			
Comm. 90% 8,000gal tks wks	gal	.23	.24
Commercially pure tks wks	gal	.23	.24
Drum lots 5c gal higher			
Benzidine Base, dry 250lb bbls	lb	.70	.74
Benzol, see Benzene			
Benzoyl Chloride 500lb drs	lb	...	1.00
Benzyl Acetate 100lb cbys	lb	1.30	1.40
Benzoate, bulk	lb	1.15	1.35
Chloride 95% tech 925lb drs	lb	...	.25
100lb cbys	lb	.25	.30
BETA-NAPHTHOL 350lb bbls wks	lb	...	.24
c-l	lb	...	.22
Sublimed	lb	.55	.60
Beta-Naphthylamine tech 200lb bbls	lb	.63	.67
Sublimed, 200lb bbls	lb	...	1.35
Blanc Fixe, dry 400lb bbls wks	ton	80.00	90.00
Imported, bbls	ton	70.00	72.00
Paste, 650lb bbls c-l	ton	45.00	55.00
BLEACHING POWDER, 700lb drs c-l wks contract	100lb	...	2.00
c-l spot wks	100lb	...	2.10
300lb drs c-l wks contract	100lb	...	2.25
c-l spot wks	100lb	...	2.35
lc-l 15c 100lbs differential			
Blues, bronze Chinese, Milori Prussian Soluble	lb	.29½	.32
Blue Vitriol, see Copper Sulfate			
Bone Ash, 100lb kegs	lb	.06	.07
Black, 200lb bbls	lb	...	.08¼
Borax, crys., 500lb bbls	lb.	.04½	.05
Powdered, 300lb bbls	lb	.04¼	.04½
Kgs 100-150 lb	lb	.04¾	.05¼
Bordeaux Mixture, 16% pd	lb	.11	.12
Paste, bbls	lb	.08	.10
Bromide, see potass. bromide etc			
Butter of Antimony, see Antimony Chloride			
Butyl Acetate normal tk drs wks	gal	1.42	1.45
Drums c-l wks	gal	1.44	1.47
Drums, lc-l wks	gal.	1.47	1.50
Secondary 50gal drums	gal	1.00	1.05
Aldehyde 50gal drs wks	lb	.70	.75
Propionate, drs	lb	.34	.36
Stearate 50gal drs	lb	...	.60
Tartrate drs	lb	.57	.60
CADMIUM, metal 100lb bxs	lb	.70	.75
CALCIUM Acetate 150lb bgs c-l 100lb		...	3.50
Arsenate, 100lb bbls c-l wks	lb	.07½	.08
Bromide, 100lb cs	lb	...	.60
Carbide, 220lb dr c-l wks	lb	.05½	.06¼
Carbonate, tech 190lb bags c-l	100lb	1.00	1.10
USP, precip, 175lb bbls	lb	...	.06½
Chloride, solid 650lb drs c-l f.o.b. wks	ton	21.00	23.00
Drums delvd. NY	100lb	1.74	1.89
Imp., Shipment	ton	...	19.50
Flake, 375lb drs c-l drs f.o.b. wks	ton	...	27.00
Drums delvd. NY	100lb	2.04	2.19
Bags delvd NY	100lb	2.04	2.19
Nitrate, 220lb bbls c-l NY	ton	...	52.00



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Chemicals

Calcium Phosphate Dibutyl Phthalate			
CALCIUM, Phos., tech450 lb bbls lb	.09	:	.10
Phosphate mono, 325 lb bbls . lb	.07	:	.08
Stearate, bbls ..... lb	.23	:	.35
Sulfocarbolate, 100 lb kegs .. lb	.53	:	.57
CAMPHOR, Amer. ref250 lb bbls lb	...	:	.72
2½ lb slabs, 100 lb cs.... lb	...	:	.73½
Jap., ref slabs 100 lb cs..... lb	.69	:	.70
Powdered ..... lb	...	:	.80
Crude, 100 lb cs ..... lb	.54	:	.56
Carbon Bisulfide 500 lb dr lc-l NY lb	.05½	:	.06
c-l drums NY ..... lb	...	:	.05¼
Carbon Black, c-l wks bags .... lb	.08	:	.09
100-300 lb cases lc-l NY . lb	...	:	.12
Decolorizing 40 lb bags c-l ... lb	.08	:	.15
90 lb drums c-l ..... lb	.08¾	:	.15¾
Carbon Dioxide, Liquid 20-25 cy lb	...	:	.06
Tetrachloride, 1400 lb drs del lb	.07	:	.07½
Drums c-l delivered ..... lb	...	:	.06¾
Casein, edib., 100 lb kegs ..... lb	.45	:	.65
Standard ground ..... lb	.15½	:	.16
Caustic Potash see potash, caustic			
Soda, see soda, caustic			
Cellulose Acetate, 50 lb kegs .... lb	...	:	1.40
Cerium Oxalate USP, 100 lb kegs lb	.33	:	.35
Chalk, drop 175 lb bbls ..... lb	.03	:	.03¾
Precip., light 250 lb bbls csks lb	...	:	.04½
Precip., heavy 560 lb casks .. lb	.02¼	:	.03½
Bulk ..... ton	...	:	5.00
Precip, English 7 lb bags ..... lb	...	:	.08½
Precip., heavy 560 lb casks ... lb	.03½	:	.03¾
Chinese Blue, See Blue			
Chloramine USP, 200 lb bbls .. lb	...	:	1.75
Chlorocosane 5 lb bot ..... lb	.55	:	.65
Chlorhydrin, Ethylene See Ethylene			
CHLORINE, Liquid tank cr multi-unit car wks contract . lb	...	:	.04
Tank car spot wks .... lb	...	:	.04¾
Carlots cyl wks contract lb	...	:	.05½
spot wks ..... lb	...	:	.05¾
lc-l cyl wks contract .. lb	.08	:	.09
Spot wks ..... lb	.08¼	:	.09¼
Chlorobenzene, mono, 100 lb drs wks lc-l ..... lb	...	:	.07
CHLOROFORM, USP, 50 lb drs .. lb	...	:	.30
Second hands 650 lb drs .. lb	.28	:	.29
Technical 1,000 lb drums .. lb	.20	:	.22
Chlorophyll Oil Sol. ..... lb	3.75	:	4.00
Water Sol ..... lb	.75	:	4.00
Chromium Acetate 20° sol'n 400 lb bbls ..... lb	...	:	.05½
Fluoride, Powd., 400 lb bbls .. lb	.27	:	.28
Oxide, Green bbls ..... lb	.34½	:	.35½
Chrome Green, CP ..... lb	.27	:	.29
Comm. ..... lb	.06½	:	.11
Chrome Yellow ..... lb	.17½	:	.18½
Clay c-l Bulk, Del., ... ton	16.00	:	18.00
Powdered 125 lb bags .... ton	...	:	20.00
Coal Tar, See Tars			
Cobalt metal 100 lb kegs .... lb	2.50	:	3.00
Cobalt Oxide 500 lb bbls ..... lb	2.00	:	2.10
10 lb tins 200 lb cases ..... lb	...	:	2.20
COPPER, metal electrolytic ..100 lb	13.57½	:	13.62½
Lake c-l NY ..100 lb	...	:	.13¾
Carbonate 400 lb bbls ..... lb	.16¾	:	.17¼
Chloride 250 lb bbls ..... lb	...	:	.28
Cyanide 100 lb drs ..... lb	.48	:	.50
Oxide, red 100 lb bbls tons .. lb	.16½	:	.17
Sub-acetate verd 440 lb bbls .. lb	.17	:	.18
SULFATE crys 450 lb bbls 100 lb	4.90	:	5.00
Carlots, bbls wks .100lbs	...	:	4.75
Powd. 350 lb 5bbls ....100 lb	...	:	5.25
Copperas bulk, crystal and sugar c-l wks ..... ton	...	:	13.00
200 lb bgs c-l wks ....ton	...	:	15.00
400 lb bbls c-l wks ....ton	...	:	18.00
Powdered bbls .....100 lb	1.90	:	2.00
Sugar, 100 lb bbls .....100 lb	1.25	:	1.35
Cotton Soluble 100 lb bbls wet .. lb	.40	:	.42
CREAM TARTAR, USP, 300 lb bbls ..... lb	.22	:	.22¼
Imp., powd., USP, 224 bbls .. lb	.21	:	.21¾
Creosote USP 42 lb cbys ..... lb	.40	:	.42
Creosote Oil Natural 50gal drs .. gal	.20	:	.21
10-15% Tar acid ..... gal	.25	:	.26
25-30% Tar acid ..... gal	.28	:	.29
Cresol, USP, 400 lb drums .... lb	.20	:	nom.
Cyclohexanol, see Hexalene			
Cymene, See Para-Cymene			
DIAMINOPHENOL, 100 lb kegs lb	...	:	3.80
Diamyl Phthalate drums, wks .. gal	2.95	:	2.97
Dianisidine, 100 lb kegs ..... lb	3.25	:	3.50
Dibutyl Phthalate wks ..... gal	2.75	:	2.80

Chloroform—Competition remains sharp although open quotations are unchanged.

Copper Sulfate—Demand is expanding and makers are increasingly firm in prices.

Copperas—Slight unsettlement in prices continues in some directions.

Cream of Tartar—Makers have advanced prices again and now name 22c@22¼c lb.

Dimethylaniline—Makers indicate that firm price conditions will prevail now that all large consumers are under contract.

Dinitrobenzene—In routine demand at unchanged prices.

Epsom Salts—Market is steady with imported technical material moving freely at $1.05 100 lbs. for carlots. U. S. P. is in heavy demand at firm unchanged prices.

Ethyl Benzyl Aniline—In slight routine demand with makers naming firm prices of $1.05@$1.11 lb.

Formaldehyde—In heavy demand at firm unchanged prices.

Glauber's Salts—Selling pressure continues heavy and low prices continue to prevail.

Glycerin—Dynamite is still quoted at 27c lb although reports are current that large powder makers have shaded this price considerably for February-March delivery. Glycerin for anti-freeze is reported to have sold very heavily and no carry over into the Spring is anticipated. Crude lye is reported sold for February at 18c lb, and saponification is quoted at 19 7/8c @ 20c lb. C. P. is openly quoted at 30c lb, but shading exists in some directions.

Hydrogen Peroxide—Sharp selling competition continues to be reported although movement is heavy.

Mercury—Market remains in a strong position.

Meta-Nitro-Para-Toluidine—Makers quote firmly at last week's reduction to $1.70 lb.

Methanol—Strong position continues in all directions although prices are unchanged.

Naphthalene—Market is increasing in activity as makers are closing many contracts for early Spring delivery.

Dibutyl Tartrate Glycerin			
Dibutyl Tartrate, 50gal drums .. lb	.55	:	.65
Dichlorobenzene, 1,000 lb drums.. lb	.06	:	.07
Dichloromethane drums, wks .... lb	.23	:	.25
Diethylamine, 400 lb drs ..... lb	...	:	2.15
Diethylaniline, 850 lb drs ..... lb	.55	:	.60
Diethyl Carbonate, drums .....gal	1.85	:	2.00
Diethyl Phthalate 1,000 drums . lb	.25	:	.28
Diethyl Sulfate tech., 50gal drs lb	.20	:	.25
Dimethylamine, 400 lb drs ..... lb	...	:	2.60
Dimethylaniline 340 lb drs wks lb	.32	:	.34
Dimethylsulfate, 100 lb drs .... lb	.45	:	.50
Dinitrobenzene, 400 lb bbls .... lb	.15	:	.15½
Dinitrochlorobenzene, 400 lb bbls lb	.15	:	.16
Dinitrochlorine, 300 lb bbls .... lb	.18	:	.19
Dinitronaphthalene, 350 lb bbls . lb	.32	:	.34
Dinitrophenol, 350 lb bbls ..... lb	.31	:	.32
Dinitrotoluene, 300 lb bbls .... lb	.15	:	.17
Diorthotolylguanidine, 275 lb bbls wks ..... lb	1.05	:	1.08
Diphenylamine ..... lb	.48	:	.50
Diphenylguanidine 100lbs bbl.... lb	.85	:	.88
EPSOM SALT, tech., 300 lb bbls NY .....100 lb	...	:	2.00
Bbls c-l NY .....100 lb	...	:	1.75
100 lb c-l NY 100 lb	1.50	:	1.75
Imp., 20 lb bags c-l ..	1.05	:	1.10
USP, 200 lb bbls 10bbls Seaboard .....100 lb	...	:	2.35
Interior .....100 lb	...	:	2.50
Carlots, bbls kegs Seaboard .....100 lb	1.90	:	2.15
Interior .....100 lb	2.00	:	2.25
Imported, 400 lb bbls .100 lb	1.70	:	2.00
ETHER, USP, 55 lb drums .... lb	...	:	.14
Ethyl Acetate, 99% 50gal drs gal	...	:	1.05
35% Ester, 10gal drs ..gal	...	:	.77
Carlots drums .....gal	...	:	.74
Tank cars .....gal	...	:	.72
Refined drums .....gal	1.72	:	1.85
Aceto Acetate drums wks .... lb	...	:	1.00
Benzyl Aniline 300 lb drs .. lb	1.05	:	1.11
Bromide, 115 lb drs ..... lb	...	:	.50
Chloride, 200 lb drs ..... lb	...	:	.22
Lactate drums wks ..... gal	...	:	3.50
Methyl Ketone, 50gal drs ... lb	.30	:	nom.
Oxalate drums wks ..... lb	.45	:	.55
Ethylene-Bromide 600 lb drs .... lb	...	:	.70
Chlorhydrin, anhyd., 50gal drs lb	.75	:	.85
40% Solution, 50gal bbls lb	.25	:	.30
Dichloride, 50gal drs ..... lb	...	:	.15
Tank cars ..... lb	...	:	.10
Glycol 50gal drums wks .... lb	.30	:	.40
Tri Chloride ..... lb	.10	:	.10½
Ethylidenaniline ..... lb	.62	:	.65
Feldspar bulk ..... ton	20.00	:	25.00
FERRIC CHLORIDE tech., crys. 475 lb bbls ..... lb	.07½	:	.09
Imported ..... lb	.04¾	:	.05
C.P., crys., 100 lb kegs .. lb	...	:	.10
Imported ..... lb	.06	:	.06½
Neut. Soln. 42° 140 lb cbys lb	.06½	:	.07
46° 140 lb cbys ..... lb	.08	:	.08½
USP, Soln 125 lb cbys .... lb	.06½	:	.07
Bromide solution ..... lb	...	:	.55
Ferrous Bromide sol'n ..... lb	...	:	.55
Chloride cryst tech 475 lb bbls lb	.05	:	.06
Sulfide 1000 lb bbls ....100 lb	2.50	:	3.00
Fiske-White see lead White			
Fluorspar, 95% 220 lb bags ex-dock .....ton	...	:	25.00
96% bags .....ton	...	:	33.50
98% bags .....ton	...	:	35.00
FORMALDEHYDE USP, 400 lb bbls c-l wks ..... lb	...	:	.11¼
Bbls 400 lb lc-l wks ..... lb	.11½	:	.11¾
Formaldehyde Aniline 100 lb drs lb	.39	:	.42
Furfural 500 lb drums ..... lb	...	:	.17½
Tanks, wks ..... lb	...	:	.15
Fusel Oil 10% Impurities drs gal	...	:	1.60
G SALT paste 360 lb bbls basis 100% ..... lb	.50	:	.52
GLAUBER'S SALT, tech., 200 lb bags c-l wks .....100 lb	1.05	:	1.10
lc-l wks .....100 lb	1.15	:	1.20
350 lb bbls c-l wks .100 lb	...	:	1.10
Bbls lc-l wks .....100 lb	1.25	:	1.35
Imported bags NY ..... lb	.75	:	.80
Calcined, see Sodium Sulfate			
GLYCERIN, CP, 550 lb drums lb	.29	:	.30
Cans, 50 lb ..... lb	...	:	.31
Dynamite, 100dr ..... lb	...	:	.27
Saponification tanks ..... lb	...	:	.20¼
Soap, Lye tanks ..... lb	...	:	.18

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November 22, 1926

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Honolulu, T. H., 923 Fort Street

Hexalene
Manganese Sulfate

Chemicals

Mercury
Para-Phenetidin

Hexalene, 50gal drs., wks	lb	...	.45
Hexamethylenetretramine drs	lb	.80	.82½
HYDROGEN PEROXIDE, 10 vol			
400 lb bbls	lb	.04⅛	.05
15vol	lb	.06	.06¼
17vol	lb	.06¼	.06½
25vol	lb	.06½	.06¾
100vol 140 lb cbys	lb	.30	.31
IODINE, crude 200 lb kegs	lb	4.20	4.25
Iridium, metal, 10oz lots	oz	...	260.00
Iron, metal by hydrogen 1 lb bot	lb	.68	.70
IRON Chloride see Ferric or Ferrous			
Nitrate, kegs	lb	.09	.10
Com'l bbls	100 lb	2.50	3.25
Oxide, red Spanish	lb	.02½	.03¼
English	lb	.10	.12
Perchloride ,see Ferric Chloride			
Isopropyl Acetate 50gal drums	gal	.85	.90
Kaolin see Clay			
LANOLIN, see Adeps Lanae			
LEAD, metal c-l NY	100 lb	...	7.80
Acetate, white crystals	500 lb		
bbls wks	100 lb	14.00	14.50
100 to 250 lb kegs wks	100 lb	...	15.00
White, broken bbls wks	100 lb	14.50	15.00
White, gran bbls wks	100 lb	14.50	15.00
White, powd bbls wks	100 lb	14.75	15.25
Brown, broken bbls wks	100 lb	13.00	13.50
Arsenate, 100 lb kegs	lb		
Bbls., c-l wks	lb	...	.15
Bbls, lc-l wks	lb	.15½	.16
Paste, 100 & 600 lb bbls	lb	.08	.09
Nitrate, 500 lb bbls wks	lb	...	.14
Oxide, Litharge 500 lb bbls	lb	...	.10¾
100 kegs wks	lb	.14¼	.15¼
Oxide, red, 500 lb wks	lb	...	.11¼
100 lb kegs wks	lb	.12¾	.16¼
Oleate, bbls	lb	.17½	.18
Peroxide, 100 lb drs	lb	.25	.30
White, basic carb., 500 lb bbls wks	lb	...	.09¾
100 lb kegs wks	lb	.14¼	.15¾
White sulfate 500 lb bbls wks	lb	.09	.09½
LIME, (Salts, see Calcium Salts)			
Ground Stone, bags	ton	...	4.50
Live, bulk	ton	...	8.50
Live, 325 lb bbls tons wks 100 lb		...	1.05
Hydrated, 167 lb bbl ton lots wks	100 lb	...	.35
Single bbl wks	lb	...	.01
Oyster Shell 150 lb bbl sing	lb	...	.03½
Sulfur dry 200 lb drs NY	lb	...	.03½
Drs. c-l NY	lb	...	.07½
33° Sol'n 50 lb bbls NY	gal	.15	.15½
Litharge see lead oxide			
Lithium Carb., USP 100 lb kegs	lb	1.45	1.50
Bromide 100 lb cs	lb	1.80	1.90
Lithopone, 400 lb bbls lc-l wks	lb	...	.06½
Bbls., c-l wks	lb	...	.05¾
Bags c-l wks	lb	...	.05¾
Imported, 400 lb bbls	lb	.05¾	.06
MAGNESITE, calcined, 500bbls	ton	48.00	50.00
Magnesium mtl., sticks 100 lb cs			
Carb., tech., 70 lb bags NY	lb	.06½	.06¾
75 lb bbls NY	lb	.08	.08½
USP, 100 lb bbls	lb	.09½	.10
English oz blocks	lb	.17	.19
MAGNESIUM, Chloride, flake 575 lb drs. c-l wks	ton	...	37.00
Imp., Flake Shipt.	ton	...	33.00
Imp., fused 900 lb bbls NY	ton	...	31.00
Fluosilicate cryst400 lb bbls wks	lb	.10	.10½
30% sol'n 500 lb bbls wks	lb	.07	.07½
Sol'n. bbls., c-l wks	lb	...	.06
Oxide, USP, light 100 lb bbls	lb	...	.42
USP, heavy 250 lb bbls	lb	...	.50
Salicylate, 100 lb kegs	lb	.75	.80
Stearate bbls	lb	.23	.25
Sulfate, see Epsom Salts			
Manganese Borate, 30% 200 lb bbls	lb	...	.24
100 lb kegs	lb	...	.25
Chloride, 600 lb csks	lb	.08	.08½
Dioxide, 80-84% 900 lb bbls NY	ton	80.00	85.00
85-90% 900 lb bbls NY	ton	85.00	90.00
Hydrated, precip 100 lb kegs	lb	.15	.23
Ore, bulk cif NY	lb	.35	.40
Sulfate, 550 lb drums NY	lb	.07	.07¼

Ortho-Toluidine—Makers report a steady increase in demand principally from flotation quarters. Prices are firm and unchanged but an advance is not unlikely due to the lower prices for para-toluidine and the increasing weakness of that market.

Para-Nitroaniline—Makers continue to name firm prices of 52c @ 53c lb and report a heavy demand. No lower prices are found in any direction.

Para-Toluidine—Market is very weak at recent reduction to 45c@ 47c lb. Stocks in some makers hands are very large and it is not known what price might be done on a large order.

Phenol — Production remains greatly in excess of consumption and selling pressure is high. Quotations are unchanged in all directions.

Phthalic Anhydride—Demand is excellent and prices are firm.

Pyridine—Interest is absolutely lacking in this market and no prices exist.

Soda Ash—Makers are naming open spot prices 5c 100 lbs. above the new contract schedule, but openly admit that it is practically impossible to obtain any premium as the spot market is sharply competitive.

Soda Caustic—In similar position to soda ash. Makers name open spot prices 10c 100 lbs. above the new contract schedule but admit that it is practically impossible any premium as spot business is sharply competitive.

Sodium Cyanide—Moving in large volume at unchanged prices.

Sodium Fluoride—In steady demand from makers and importers who quote firm unchanged prices.

Sodium Phosphate—Movement of di-salt continues to increase as the Paterson silk district returns to normal activity. Tri-salt is in heavy demand at firm unchanged prices.

Sodium Prussiate—Practically all large consumers are under contract with domestic makers at prices of 11c@11¼c lb as to quantity. Spot business is slight.

Sodium Sulfide—Domestic makers report an excellent demand although imported material continues to offer sharp competition in

MERCURY, metal 75 lb flask	flask	99.00	99.50
eta-Nitroaniline	lb	.72	.74
eta - Nitro - para-Toluidine, 200 lb bbls	lb	...	1.70
Meta - Phenylenediamine, 300 lb bbls	lb	.90	.94
Meta - Toluylenediamine, 300 lb bbls	lb	.72	.74
Tanks	lb	...	.70
METHANOL (Wood Alcohol) drms. 95%	gal	...	.80
Drums, c-l	gal	...	.83
Drums, lc-l	gal	...	.85
97% tanks	gal	...	.82
Drums, c-l	gal	...	.85
Drums, lc-l	gal	...	.87
Pure, Acetone free, tanks	gal	...	.85
Drums, c-l	gal	...	.88
Drums, lc-l	gal	...	.90
U. S. denat., grd., tanks	gal	...	.80
Drums, c-l	gal	...	.83
Methyl Acetate drums	gal	...	.95
Methyl Acetone, 100gal drums	gal	.88	.90
Tank cars	gal	...	.85
Chloride, 90 lb cyl	gal	.55	.60
Monobromobenzene See Bromobenzene			
Monacetine, See Acetine			
Monochlorobenzene, see Chlorobenzene			
Monethylaniline, 900 lb drs	lb	...	1.05
Monomethyl paraminophenol sulfate 100 lb drs	lb	3.95	4.20
NAPHTHA, see Solvent Naphtha			
NAPHTHALENE, Fiske, 175 lb bbls wks	lb	...	.05
Balls, 250 lb wks	lb	...	.06
Crushed, chipped bgs wks	lb	...	.04¼
Crude, imp., bags	lb	.02	.02¼
NICKEL, Ingot 100 lb kegs		...	.35
Chloride, bbls kegs	lb	.21	.24
Oxide, 100 lb kegs NY	lb	.35	.38
Salt single 400 lb bbls NY	lb	.08	.08½
Double 400 lb bbls NY	lb	.08½	.09
Sulfate, See Nickel Salt single			
Nickel Metal, electrolytic	100 lb	...	84.00
Nicotine, Free 40% 8 lb tins cs	lb	1.10	1.20
NITRATE SODA, spot, See Sodium Nitrate			
Nitre Cake, bulk wks	ton	4.50	5.50
500 lb bbls	ton	13.00	14.00
Nitrobenzene, crude, 1,000 lb drs wks	lb	.08½	.09½
Redistilled 1,000 lb drs wks	lb	.09¼	.10¼
Nitronaphthalene, 550 lb bbls	lb	...	.25
Nitrotoluene, mixed 1,000 lb drs wks	lb	.14	.15
Oil Fusel, See Fusel Oil			
Oil Mirbane, see nitrobenzene			
Orange Mineral, 1100 lb csks NY	lb	...	.14½
700 lb bbls NY	lb	...	.14¾
Ortho-Aminophenol, 50 lb kegs	lb	2.20	2.25
Ortho-Anisidine, 100 lb drs	lb	2.50	2.75
Ortho-Dichlorbenzene, see Dichlorbenzene			
Ortho-Nitrochlorobenzene, 1,200 lb drs. wks	lb	.32	.35
Ortho-Nitrophenol, 350 lb	lb	.85	.90
Ortho-Nitrotoluene, 1,000 lb drs wks	lb	.13	.14
Ortho-Toluidine 350 lb bbls	lb	.25	.27
PALLADIUM, metal 10oz lots	oz.	80.00	81.00
Para-Aminoacetanilid, 100 lb kgs	lb	1.00	1.05
Para-Aminophenol, 100 lb kegs	lb	...	1.15
Hydrochloride, 100 lb kegs	lb	1.25	1.30
Para-Dichlorbenzene, 150 lb bbls wks	lb	.17	.20
25-50 lb kegs	lb	.20	.21
Paraldehyde 110-55gal drs USP tech	lb	.26	.28
Para-Cymene Ref'd. 110gal drs.	gal	2.25	2.50
Paraformaldehyde USP 100 lb cs	lb	.53	.53½
Para-Nitroacetanilid, 300 lb bbls	lb	.50	.55
Para-Nitroacetanilid 300 lb bbls	lb	.50	.55
PARA-NITROANILINE, 300 lb bbls wks single bbls	lb	.52	.53
Para-Nitrochlorobenzene, 1,200 lb drs wks	lb	...	.32
Para-Nitro-ortho Toluidine, 300 lb bbls	lb	2.75	2.85
Para-Nitrophenol, 185 lb bbls	lb	.50	.55
Para-Nitrosodimethylaniline, 120 lb bbls	lb	.92	.94
Para-Nitrotoluene, 350 lb bbls	lb	...	.30
Para-Phenetidin, 500 lb drs	lb	1.55	1.80

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Para-Phenylenediamine
Sal Soda

Chemicals

Salt Common
Sodium Oxalate

Para-Phenylenediamine 350 lb bbls lb	...	:	1.20
Para - Toluene-Sulfonamide, 175 lb bbls lb	.40	:	.41
Para - Toluene-Sulfonchloride, 410 lb bbls wks lb	.18	:	.30
Para-Toluidine, 350 lb bbls wks lb	.45	:	.47
PARIS GREEN,			
Arsenic Basis, 500 lb kegs lb	.19	:	.20
Kegs, 100 lbs lb	.21	:	.22
Paris White, see Whiting French			
PETROLATUM, green 300 lb bbls lb	.02½	:	.03
Dark Amber, 300 lb bbls lb	...	:	.04¼
Light Amber, 300 lb bbls lb	...	:	.04½
Phenol, see also acid carbolic 950 lb drums wks lb	.18	:	.19
Small drums 250-100 lb lb	.18	:	.19
Natural 240 lb des drs wks lb	...	:	...
Phenyl-Alpha-Naphthylamine 100 lb kegs lb	1.28	:	1.29
Phosphorus, red 110 lb cs lb	...	:	.65
Yellow 110 lb cs wks lb	...	:	.32
Imported, 110 lb cs wks lb	.35	:	.37½
PhosphorousOxychloride 175 lb cyl lb	.35	:	.40
Phosphorous Sesquisulfide 100 lb cases lb	...	:	.46
Phthalic, Anhydride, 100 lb bbls wks lb	.18	:	.20
Pitch, Coal-Tar wks ton	24.00	:	26.00
Plaster Paris, tech 250 lb bbls bbl	...	:	3.30
Platinum metal soft, 10oz lots oz	110.00	:	112.00
POTASH SALTS, rough			
Pot. Muriate basis 80% bgs ton	...	:	36.40
Pot. Sulfate, basis 90% bgs ton	...	:	47.30
Pot. & Mag. Sulfate basis 48% bags ton	...	:	27.00
Manure Salts basis 30% bulk ton	...	:	18.75
Manure Salts basis 20% bulk ton	...	:	12.40
Kainit, basis, 12.4% bulk ton	...	:	9.00
Kainit, basis, 14% bulk ton	...	:	9.50
tons 10%			
Bulk in bags $2.00 extra			
Prices cif. Atlantic&Gulf Ports			
POTASSIUM Acetate, USP, 100 lb kegs lb	.29	:	.30
Bicarbonate crys 320 lb bbls lb	.09	:	.09½
Bichromate, crys., 725 lb csks lb	.08	:	.08¼
Powd., 725csks wks lb	.11	:	.12
Binoxalate, 300 lb bbls lb	.16	:	.17
Import, 112 lb bbls lb	.18	:	.19
Bisulfate, 100 lb kegs lb	...	:	.30
BROMIDE, USP, cryst, gran. 100 lb bbls lb	.48	:	.49
Imported, USP, 220 lb cs lb	.38	:	.41
CARBONATE, 80-85% calc. 800 lb cks lb	.05⅝	:	.05¾
80-85% hydrated cks lb	.05⅝	:	.05½
90-95 calc. casks lb	.06¼	:	.06½
96-98% calc. casks lb	.06¾	:	.07
99% calc casks lb	...	:	.07½
USP 100 lb kegs lb	.11	:	.11½
99% CP, casks lb	...	:	.12½
Chlorate cryst powd 112 lb kegs wks lb	.08½	:	.09
Imp., 112 lb NY lb	.08¼	:	.08½
Gran. Imp., 112 lb kegs NY lb	.10½	:	.11
Chloride, crys., bbls lb	.05⅝	:	.05½
Chromate, kegs lb	.27	:	.28
Citrate, USP, 50 lb lb	...	:	.60
Cyanide 110 lb cases lb	.55	:	.57½
Metabisulfite, 300 lb bbls lb	.11½	:	.12
Imp., 550 lb bbls lb	.11½	:	.12
Nitrate, see Saltpetre			
Oxalate, neutral, 225 lb bbls lb	.16	:	.17
Perchlorate 112 lb kegs lb	.11	:	.12
PERMANGAN, USP, crys., 500 lb & 100 lb drs wks lb	.14¼	:	.14⅓
Imp., 113 lb drs lb	.13½	:	.14
Prussiate red, 112 lb kegs lb	.39	:	.40
Prussiate, yellow 500 lb casks lb	.18	:	.18½
Tartrate, neutral 100 lb kegs lb	...	:	.51
Titanium Oxalate, 200 lb bbls lb	...	:	.25
Pyridine, 50gal drs gal	...	:	3.00
QUICKSILVER, see Mercury			
Quinone, 100 lb kegs lb	1.75	:	2.25
R SALT, 250 bbls wks lb	.45	:	.46
Red Lead, See Lead Oxide			
Rochelle Salt, USP, 225 lb bbls lb	.20	:	.20½
Imp., USP, 300 lb bbls lb	.19	:	.19½
Sal Ammoniac, see Ammon. Chloride			
Sal Soda, see Sodium Carbonate			

some directions. The formation of a syndicate abroad is expected to be felt in the spot prices of imported material.

Solvent Naphtha—Market is firm in price but supplies are easy. Production is easily controlled by producers.

Tin Salts—Prices have reacted upward following the metal, and makers quote crystals at 46 1/2c lb; bichloride at 19 1/2c lb; and tetrachloride at 39 1/2c lb.

Toluene—Heavy demand continues to absorb all production at firm unchanged prices. Lacquer makers continue to take the great bulk of the material.

Toners—The market is well maintained in all directions and sales are being made in a volume fully up to expectations for the season with makers quoting prices of 85c@90c lb for lithol red; 75c@80c lb for para red and $1.75@$1.80 lb for toluidine.

Triphenylguanidine—Moving at unchanged prices with sellers reporting little change in market activity.

Vermilion—Sales on this market in both domestic and English are in fair volume with the market firm. Both grades are quoted on a par at $1.55 lb with few concessions heard. With the continued strength in mercury further advances are not unlikely.

Xylene—Producers report an increasing demand due to lacquer manufacturers taking increased quantities to mix with toluene. Prices are firm and unchanged in all directions although supplies are easy.

Zinc Ammonium Chloride—Increasing demand is reported by importers who quote unchanged prices.

Zinc Chloride—Demand is excellent and prices are firm and unchanged from both makers and importers.

OILS AND FATS

Castor Oil—Since the recent advance in all grades there has been no change in the price. The demand continues brisk and the market is well maintained at the quoted levels.

Chinawood Oil—Contingent on the political troubles in China and also supported by an improving inquiry here the spot and coast markets are sharply higher this week. Current offers are heard at 13¾c@14c lb fo spot oil in barrels. The Coast market in

Salt, Common, see Sodium Chloride			
Salt Cake 94-96% c-l wks ton	19.00	:	20.00
White 87% wks ton	15.00	:	17.00
SALTPETRE, Double refined Granular, 450-500 lb bbls lb	.06⅛	:	.06¼
c-l wks lb	...	:	.06
Powdered, bbls c-l wks lb	...	:	.07¼
Large Crystals, bbls c-l wks lb	...	:	.08
Triple Refined Gran bbls wks lb	.06⅝	:	.06¾
Satin White, 500 lb bbls lb	...	:	.01½
SILICA Crude, bulk, mines ton	6.00	:	7.00
Refined, floated bags ton	15.00	:	30.00
Air floated bags ton	32.00	:	50.00
Extra, floated, bags ton	55.00	:	65.00
SILVER, metal American oz oz	...	:	.55½
SODA ASH, 58% light bags delivered NY 100 lb	2.04	:	2.19
bbls., delvd. NY 100 lb	2.29	:	2.44
Contract, c-l,bgs,wks. 100 lb	...	:	1.32½
58% dense c-l bgs.wks. 100 lb	...	:	1.32½
Spot 5c 100lbs differential			
CAUSTIC, 76% solid drums delv'd. NY 100 lb	3.66	:	3.81
Ground & Flake 76% drums del., NY 100 lb	4.06	:	4.21
bbls del. 100 lb	4.31	:	4.46
Contract c-l wks 100 lb	...	:	3.00
Spot c-l wks 100 lb	...	:	3.10
Ground & Flake, 76%, Spot, wks c-l 100 lb	...	:	3.50
USP, stick, 10 lb cans lb	.19	:	.21
Pure, stick, by alcohol lb	.25	:	.27
Soda Sal. see Sodium Carbonate			
Sodium Metal, 12½ lb bricks lb	...	:	.27
SODIUM ACETATE, crys 450 lb bbls wks lb	.04½	:	.05
Aluminate, 500 lb bbls wks lb	.07½	:	.08
Aluminum Sulfate, see Alum Soda			
Arsenate, 4 lb mtl. wks drms gal	.50	:	.60
Drums, 8 lb material wks gal	1.00	:	1.20
Bicarbonate 400 lb bblsNY 100 lb	...	:	2.41
Bbls c-l wks 100 lb	...	:	2.00
112 lb kegs c-l wks lb	...	:	2.25
112 lb kegs c-l wks 100 lb	...	:	2.25
Bichromate, 500 lb casks wks lb	.06¼	:	.06¾
Bisulfite, dry powder 500 lb bbls wks lb	...	:	.08½
Imported lb	...	:	.08
BROMIDE, USP, 100 lb cs lb	.48	:	.49
Imp. USP., 220 lb cases lb	.44½	:	.45
Carbonate 350 lb bbls NY 100 lb	1.30	:	1.35
Works c-l 100 lb	1.10	:	1.30
Monohydrate, 400 lb bbl 100 lb	...	:	2.40
Pure photographic 100 lb			
Imported, 112 lb kegs lb	.06¼	:	.06½
Chloride, tech ton	12.00	:	13.00
CP, 300 lb bbls lb	.05	:	.06
Chlorate, 112 lb kegs wks lb	.06¼	:	.06½
kegs lb	.06	:	.08
Chromate, 800 lb bbl lb	...	:	.08
Cyanide 96-98% 100 & 250 lb drums wks lb	...	:	.20
c-l wks lb	...	:	.19
Imp., 95-97% 100 lb drs lb	.18	:	.19
Fluoride, 300 lb bbls wks lb	.08¾	:	.09
Imp., 700 lb cks lb	.09	:	.10
Hydroxide, see Soda Caustic			
Hypochlorite Soln 100 lb cbys lb	...	:	.05
14½ soln 50 lb cbys lb	...	:	.04
Hydrosulfite200 lb bbls fobwks lb	.22	:	.24
HYPOSULFITE, tech., pea crys 375 lb bbls., wks 100 lb	2.65	:	3.05
Bbls., c-l wks 100 lb	...	:	2.50
100 lb kegs wks 100 lb	2.80	:	2.90
Imp. 100 lb	2.75	:	3.00
Regular crys., bbls wks 100 lb	2.40	:	2.65
Bbls., c-l wks 100 lb	2.40	:	2.50
Kegs, wks 100 lb	2.35	:	2.45
Imp. 100 lb	2.35	:	2.45
Meetanilate, 150 lb bbls lb	.70	:	.75
Molybdate, 100 lb kegs lb	...	:	1.10
Naphthionate, 300 lb bbls lb	.55	:	.57
Nitrate crude, 95% 200 lb bgs c-l NY 100 lb	...	:	2.60
Dec.-Shipment 100lbs	...	:	2.60
Double Refined 400 lb bbls Gran c-l wks lb	...	:	.03⅞
Nitrite, 500 lb bbls spot mkrs lb	.08¾	:	.09
Imp., 650 lb casks lb	.08¾	:	.09
Ortho - Chloro - Toluene Sulfonate 175 lb bbls wks lb	.25	:	.27
Oxalate, neutral, 100 lb kegs lb	.20	:	.23

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Chemicals

SODIUM (Continued)			
Perborate, 275 lb bbls	lb	.21	.22
Peroxide, 200 lb cases	lb	.23½	.24
Phosphate, di-sodium tech 550 lb bbls	100 lb	3.25	3.55
Imp	100 lb	...	3.25
Mono-sodium 100 lb kegs	lb	.30	.31
Tri-sodium tech c-l bbls 100 lb		...	3.90
Picramate, 100 lb kegs	lb	...	.69
Para-Toluene Sulfonate 175 lb bbls	lb	.08	.09
PRUSSIATE, yellow 350 lb bbls wks	lb	.11	.11½
Imp., 50 lb cks	lb	.10⅞	.11
Pyrophosphate, 100 lb kegs	lb	.13½	.14
Salicylate, 100 lb kegs	lb	.37	.38
Silicate, 40° turbid, tanks wks	100 lb	...	.75
55gal drums wks	100 lb	.85	1.10
40° clear, tanks wks	100 lb	...	1.10
55gal. drs wks	100 lb	1.20	1.45
42° turbid tks., wks	100 lb	...	.80
55gal drs wks	100 lb	.90	1.15
42° clear, tanks wks	100 lb	...	1.25
55gal drs., wks	100 lb	1.35	1.75
Silicofluoride, 450 lb bbls NY	lb	.04½	.05
Stannate, 100 lb drums	lb	.48½	.49
Sulfanilate 400 lb bbls	lb	...	.16
Sulphate, see Glauber's Salt			
Sulfate, Anhydrous 550 lb bbls c-l wks	lb	.02¾	.03¾
Imp., 250 lb bbls	lb	.01⅞	.02
Sulfide, 60% solid, 650 lb drs le-l wks	lb	.03¾	.04
Drs., c-l wks	lb	...	.03½
Imp., 700 lb drs NY	lb	.03	.03½
60% brkn. 650 lb drs wks	lb	.04	.04¼
Drs., c-l wks	lb	...	.03¾
30% crys 440 lb bbls wks	lb	.02½	.02¾
Imp., 400 lb bbls	lb	.02¼	.02½
Sulfite, cryst 400 lb bbls wks	lb	.03¾	.03½
Anhydrous USP, 100 lb kgs	lb	.08¼	.09
Sulfocarbolate USP 100 lb kgs	lb	.32	.34
Sulfocyanide, 400 lb bbls	lb	.40	.45
Tungstate, cryst., 100 lb kegs	lb	.80	.82½
SOLVENT NAPHTHA, 110gal drs wks	gal	...	.40
8,000gal tank cars wks	gal	...	.35
STRONTIUM, Bromide, USP, 50 lb kegs	lb	.51	.52
Carbonate, 600 lb bbls wks	lb	.07¼	.07½
100 lb kgs wks	lb	...	.08
Nitrate, 600 lb bbls NY	lb	.08	.08½
SULFUR Crude, fob mines	ton	18.00	19.00
Brimstone Broken Rock 250 lb bgs c-l	100 lb	...	2.05
Less c-l bbls NY	100lbs	2.35	2.55
Roll, 150 lb bgs c-l NY 100 lb		...	2.25
Less c-l bbls NY	100 lb	2.65	2.85
Flour, Heavy bgs c-l	100 lb	...	2.50
Light, 100% bags c-l 100 lb		...	2.60
Rubbermakers 100% 240 lb bbls, c-l bags NY 100 lb		...	2.60
Comm'l 99% c-l 150 lb bgs NY	100 lb	...	1.45
For Dusting c-l 99½% 100 lb bags NY	100 lb	...	2.40
Flowers 100% 155 lb bbls NY c-l	100 lb	...	3.45
Precipitated 125 lb bbls NY	lb	...	.17
Lac., 125 lb bbls NY	lb	...	.12
Sulfur Chloride, red, 700 lb drs wks	lb	.05	.05½
150 lb cbys wks	lb	...	.06½
Yellow, 700 lb drs wks	lb	.03¾	.04½
Sulfur Dioxide, 100 lb cyl	lb	.17	.19
Sulfuryl Chloride, 600 lb drs	lb	.65	.70
Tar Coke Oven, Tks., wks	gal	.07	.08
Water Gas, Tks., wks	gal	...	.08
Terra Alba No 1 300 lb bbls 100 lb		1.85	1.90
Tetralene, 50gal drs wks	lb	...	.20
Thiocarbanilid, 170 lb bbls	lb	.22	.24
TIN, metal Straits, NY	lb	...	.71½
99% American NY	lb	...	.71
Bichloride, 50% sol'n. 100 lb bbls wks	lb	...	.19¼
Crystals, 500 lb bbls wks	lb	...	.46
100 lb kegs wks	lb	...	.46½
Oxide, 300 lb bbls wks	lb	...	.70
100 lb kegs wks	lb	...	.72
Recovered bbls	lb	...	.68
Tetrachloride, 100 lb drs wks	lb	...	.39

tanks for January is named at 12c@12¼c lb and February at 11 1/4c@11 1/2c lb.

Coconut Oil—There seems a better tone to the spot market for Ceylon and Manila oil this week. Consumer interest is reviving and sales were made last week at 9 3/8c @9 1/2c lb for barrels at New York. Manila oil in tanks here and on the Coast is higher at 8c lb and 8 3/8c lb respectively.

Corn Oil—Crude oil shows no change from the easy movement of last week and offerings are heard in several directions at 7c@7¼c lb at the mills and 9¾c@10c lb in barrels on spot.

Cottonseed Oil—Each week shows slight gains in the spot price of PSY oil. The tone of the market has not noticeably improved, but sales have been in better volume and the market is fairly firm at the quoted level which was not the case toward the close of last year.

Greases—All grades are steady and are held at the level of the past month. Current quotations are: choice white, 10c lb; yellow and house at 6¼c lb; brown, 6c lb.

Lard Oil—The trend is easier this week witnessed reductions of ¼c lb. Quotations are, edible prime, 15c lb; extra 12¼c lb; extra No. 1, 10¼c lb; extra No. 2, 9¾c lb.

Linseed Oil—Again shows declines for the week with the current market for raw oil in carload barrels openly quoted at 10.3c lb. Inside offers on good sized parcels are heard at 10.1c lb. Reports from other markets indicate a routine inquiry in all directions. Consumers here continue to hold off from purchasing in round lots.

Neatsfoot Oil—The higher grades have passed through the holiday period and the early days of the New Year without change but the extra and No. 1 grades are lower at 10¼c lb and 10c lb respectively. Consumer interest is fair.

Oleo Oil—Although prices are steady at the moment the present market represents reductions since last reported. Offerings are heard at 10c@10¼c lb for No. 1; 10c lb for No. 2 and 8 1/2c lb for No. 3.

Olive Oil—Sales in fair volume were made of denatured oil this

Titanium Oxide, bbls wks	lb	.13	.14
Tolidine, 350 lb bbls	lb	.90	.94
Toluene, 8,000gal tnk cars wks	gal	...	.35
110gal drs wks	gal	...	.40
Toluidine, Mixed, 900 lb drs wks	lb	.31	.32
Toner Lithol Red bbls	lb	.85	.90
Para Red bbls	lb	.75	.80
Toluidine	lb	1.75	1.80
Triacetin, 50gal drs wks	gal	3.60	3.90
Tribromphenol, 100 lb cases	lb	...	1.10
Triphenylguanidine	lb	.70	.75
Triphenyl Phosphate, 450 lb bbls	lb	...	.75
Tungsten, NY	WOunit	10.75	11.00
Ultramarine Blue	lb	.15	.25
Urea Pure, 112 lb cases	lb	.18	.20
Venetian Red	lb	...	.60
Vermilion Amer., 100 lb bags	lb	...	1.55
English kegs	lb	1.55	1.60
WHITE LEAD, see lead, white			
XYLENE, 3° 8,000 gal. tanks wks NY	gal	...	.55
5° tanks wks	gal	...	.45
10° tanks wks	gal	...	.38
Com'l tanks wks	gal	...	.36
Drum lots 5c gal higher			
Xylidine crude	lb	...	.35
Refined	lb	.38	.40
ZINC METAL, high grade slabs c-l NY	100 lb	...	7.35
Ammonium Chloride, powd 400 lb bbls	lb	...	.06¼
Carb., tech., bbls NY	lb	.09½	.10
USP, 100 lb kegs	lb	...	.20
Chloride, fused 600 lb drs wks	lb	...	.06
Drs., c-l wks	lb	...	.05¾
Granulated, 500 lb bbls wks	lb	.06¼	.06½
Imported, dr NY	lb	.06¼	.06¾
Solution 50% tnks wks 100 lb		...	3.00
Cyanide, 100 lb drs	lb	.40	.41
Dust, 100 lb tins wks	lb	...	.10
500 lb bbls kegs c-l wks	lb	...	.09
Oxide, Amer., Bags wks	lb	.07¾	.07⅞
Amer., 300 lb bbls wks	lb	.07⅝	.07⅞
French, 300 lb bbls wks	lb	.10⅜	.12¾
Bbl c-l wks	lb	.10⅜	.12¾
Bags c-l wks	lb	.10¼	.12½
USP, 100 lb bbls c-l	lb	...	.14
10-25 bbl lots	lb	...	.15
5bbl lots	lb	...	.16
1bbl lots	lb	...	.17
Imported, white seal, bbls	lb	.12	.13½
Green seal, bbls	lb	.11½	.12
Red seal bbls	lb	.10½	.11
Stearate, USP, 50 lb bbls	lb	.21½	.24
Sulfate, 400 lb bbls wks	lb	.03	.03¼
Bbls c-l wks	lb	...	.02½
USP, 100 lb bbls	lb	.08	.09
Sulfide, 500 lb bbls	lb	.30	.32
Sulfocarbolate, 100 lb kegs	lb	.29	.30

Oils & Fats

Castor, No. 1, 400 lb bbls	lb	.13½	.14
80 lb cases	lb	.14½	.15
No. 3	lb	.13	.13½
Blown, 400 lb bbls	lb	...	.18
China Wood bbls spot NY	lb	.13¾	.14
Tanks, Spot NY	lb	...	.12½
Coast tanks		.11¾	.12
Coconut Ceylon 375 lb bbls NY	lb	.09¼	.09½
8,000 gal tanks NY	lb	...	.08
Cochin, 375 lb bbls NY	lb	.10	10¼
Tanks, NY	lb	...	.09¾
Manila bbls NY	lb	.09¼	.09½
Tanks NY	lb	.08⅝	.08½
Tanks Pacific Coast	lb	.08	.08¼
Edible bbls NY	lb	.12	.12½
Cod Newfoundland, 50gal bbls	gal	.66	.68
Tanks, NY	gal	.59	.61
Cod Liver, see Cod Liver Oil under Chemicals			
Copra, bags	lb	.06	.06¼
Corn, ref. 375 lb bbls NY	lb	.14	.14¾
Tanks,	lb	.12	.12¼
Crude tanks mills	lb	.07	.07¼
Bbls NY	lb	.09¾	.10
Cottonseed Crude, mill	lb	.06¾	.06⅝
PSY, 100 bbls spot	lb	.08⅜	08½
Feb-Mar	lb	...	.08½
White, 100 bbls lots NY	lb	...	.13½
Degras, Amer., 50gal bbls NY	lb	.04¼	.04½
English, light bbls NY	lb	.05¼	.05½
Brown, bbls NY	lb	.04⅝	.04¾

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Turkey Red Oil

Oils & Fats

Albumen, Egg Edible
Glue

Degras, Eng., light brn, bbls, NY	lb	.04½	.04¾
Light brown bbls NY	lb	.04½	.04¾
Dark, bbls NY	lb	.03½	.04
Neutral, bbls NY	lb	.07½	.12
Moellon, bbls., NY	gal	...	.50
Greases choice white bbls NY	lb	...	.10½
Yellow	lb	...	.06½
House	lb	...	.06½
Brown	lb	...	.06
Herring, Tanks, Coast	gal	nom.	nom.
Horse, 375 lb bbls NY	lb	.10	nom.
Lard, prime steam bbls	lb	.13¾	.14
Compounds, bbls	lb	.13¾	.14
LARD OIL, edible prime	lb	...	.15
Off prime bbls	lb	...	.13¾
Extra bbls	lb	...	.12¼
Extra, No. 1 bbls	lb	...	.10¼
No. 1 bbls	lb	...	.10
No. 2 bbls	lb	...	.09¾
LINSEED, raw c-l bbls spot	lb	...	.10.3
Five bbls raw	lb	...	10.7
Tanks, raw	lb	...	9.7
Bld., 5bbl lot wks	lb	...	10.9
Dbl boiled 5bbl	lb	...	11.0
Jan. March c-l wks	lb	....	10.3
Menhaden, crude tanks Balt	gal	...	.47½
Light pressed, bbls NY	gal	.65	.67
Yellow bleached bbls NY	gal	.68	.70
Extra bleached bbls NY	gal	.70	.72
Blown bbls NY	lb	...	.10
Mineral Oil, white, 50gal bbls	gal	.80	.90
Russian	gal	.95	1.00
Neatsfoot 20° ct., bbls NY	lb	...	.15¾
Pure bbls NY	lb	...	.13¼
CP bbls NY	lb	...	.15¼
Extra bbls NY	lb	...	.10¼
No. 1 bbls NY	lb	...	.10
Oleo Oil, No. 1, bbls NY	lb	...	.10
No. 2, bbls NY	lb	...	.08¾
No. 3, bbls NY	lb	...	.08½
OLIVE, denatured bbls NY	gal	1.40	1.45
Edible, bbls NY	gal	...	2.00
Foots bbls NY	lb	09¾	.10
Shipments	lb	.08¼	.08½
Palm Lagos, 1,500 lb casks	lb	.08¼	.08½
Niger casks	lb	.07⅝	.07½
Bonny Old Calabar casks	lb	...	nom.
Palm Kernel bbl NY	lb	.09½	.09¾
Casks	lb	.08	.09⅛
Peanut refined bbls NY	lb	...	.14¼
Crude, mills buyers' tks	lb	.09	.09⅛
Crude, bbls NY	lb	...	.14½
Perilla bbls NY	lb	.13	.13¼
Tanks, Coast	lb	.10¼	.10½
Poppyseed, bbls NY	gal	1.70	1.75
Rapeseed bbls NY Japanese	gal	.76	78
English	gal	.82	.84
Blown bbls NY	gal	1.00	1.02
Red Oil, distilled bbls	lb	.10	.10½
Tanks	lb	...	.08¾
Saponified, bbls	lb	.10½	.11
Tanks	lb	...	.09
Salmon, 8,000 gal tks Coast	gal	.50	nom.
Sardine, Tanks Pacific Coast	gal	...	.47
Sesame edible yellow bbls	lb	.11½	.12
White	lb	.14	.15
Sod Oil, bbls NY	gal	...	.40
SOYA BEAN, crude tks Pac Cst	lb	.09¼	.09½
Crude, tks NY	lb	.10¼	.10½
Crude, bbls., NY	lb	.12	.12¼
Refined bbls NY	lb	...	.13
Sperm, 38° ct., blchd, bbls NY	gal	.85	.86
45° cold test blchd bbls NY	gal	.82	.84
STEARIC ACID,			
Double pressed, bags dist	lb	.13¼	.13⅝
Double pressed, bgs saponified	lb	.13½	.13¾
Carlots	lb	...	.13
Triple pressed bgs dist	lb	.15¼	.15½
Carlots	lb	...	.15
Stearine Oleo bbls	lb	08¾	.09
Tallow edible tierces	lb	...	.10
City Extra loose	lb	...	.07¼
Tallow Oil, acidless tks NY	lb	.08½	.08¾
Bbls c-l NY	lb	...	.10
Whale, nat winter bbls NY	gal	.76	.78
Blchd, winter bbls NY	gal	.78	.80
Extra blchd bbls NY	gal	.80	.82
Yolk Oil, bbls	lb		
Turkey Red, Oil, single bbls	lb	.11	.12
Double	lb	.14	.16

week at $1.40@$1.45 gal. as to seller and quantity. Foots continues as a strong feature of the market with importers experiencing no trouble in disposing of incoming parcels at 9¾c lb. Futures are off a shade to 9¼c lb from 9 3/8c lb, but the market in all positions is very firm.

Palm Kernel Oil—Movement has been limited since the first of the year and spot prices are off to 9 1/2c@9 3/4c lb in barrels and 9c@9 ⅛c lb in casks.

Rapeseed Oil—Lower prices prevail for English and Japanese grades with sales in a small way at 76c@78c gal. for Japanese and 82c@84c gal. for English. Blown oil is unchanged.

Red Oil—The demand has continued over the turn of the year and orders are being filled at unchanged prices.

Tallow—Has been moving between 7c and 7¼c lb for some time and at the moment is named at the latter figure on spot.

INDUSTRIAL RAW MATERIALS

Albumen—With sellers in China pressing for sales here the spot market continues in its soft position with offerings heard at 80c@83c lb for edible egg. Factors are experiencing a good demand. Technical is named at 77c@79c lb.

Blood—This week has shown little change from last. Inquiry on spot is very routine and the market is easy. Following its advance of last week South American is steady but quiet. Chicago remains at $4.35 unit.

Bone Meal—The position on this market is relatively the same, with most holders asking $29.00@$30.00 ton for imported goods.

Carnauba Wax—On spot the situation continues very tight with prices of No. 1 yellow a minor consideration. Regular No. 2 is likewise in small supply and the position on both grades is not expected to be altered for some time.

Divi-Divi—At the recently established level of $43.00@$44.00 ton there is a good interest with scant offerings from the primary markets.

Egg Yolk—Spot position is still firm with very limited offerings noted at 72c@74c lb. This condition is expected to exist until late Spring or early Summer when

Industrial Raw Materials

Albumen, Egg edible	lb	.80	.83
Tech., 100 lb drs	lb	.77	.79
Blood, 225 lb bbls	lb	.45	.55
Vegetable edible	lb	.60	.65
Technical	lb	.50	.55
Annatto, fine	lb	.41	.48
Archil., double 600 lb bbls	lb	.13	.14
Triple, 600 lb bbls	lb	.16	.17
Cone, 600 lb bbls	lb	.18	.20
Asbestine c-l wks	ton	...	14.75
lc-l wks	ton	...	18.00
Bees Wax, white cases	lb	.58	.60
Yellow, refined cases	lb	.46	.48
Crude, bags	lb	.40	.41
Commercial cs,	lb	.27	.28
Blood dried fob NY	unit	...	3.80
Chicago	unit	...	4.35
S Am Shipment	unit	...	3.90
Bone Raw, Chicago	ton	30.00	31.00
Bone Meal, 3 & 50 imp	ton	28.00	29.00
Bone Ash, 100 lb kegs	lb	.06	.07
Black, 200 lb bbls	lb	...	.08¼
Candelilla Wax, bags	lb	.33	.35
Carnauba Wax, Flor., bags	lb	.50	nom.
Powd	lb	.50	nom.
No. 1, Yellow, bags	lb	.88	.90
No. 2, regular bags	lb	.68	.70
No. 2, N. Country bags	lb	...	nom.
No. 3 N Country bags	lb	.38	.40
No. 3, chalky bags	lb	.38	.40
CHARCOAL			
Hardwood, lump, bulk wks	bu	.18	.19
Wood, powd., 100 lb bbls	lb	.04	.05
Willow, powd 100 lb wks bbls	lb	.06	.06¼
Chestnut clarified 25% tks wks	lb	.01½	.01¾
Bbls., wks	lb	.02½	.02¾
Powd., 60% 100 lb bags wks	lb	.05½	.05¾
Decolorized bags wks	lb	.06½	.07
Coalbear, English	lb	.17	.18
Cutch Rangoon 100 lb bales	lb	...	.15
Tablets, 120 lb boxes	lb	.13	.14
Borneo solid, 100 lb bales	lb	.05½	.05¾
Cyanamide, bulk, c-l wks Amm unit		1.82½	1.90
Imp. Amm. unit		1.80	1.85
Dextrin, white corn 140 lb bags			
c-l 100 lb		...	3.87
bags c-l 100 lb		...	3.97
Canary 100 lb		...	3.92
bags lc-l 100 lb		...	4.02
Potato, white 220 lb bags lc-l	lb	...	.08½
Yellow, 220 lb bags	lb	...	.08½
Tapioca, 200 lb bags lc-l	lb	.08	.08¼
Divi Divi Extract	lb	.04	nom.
Pods, bags ship	ton	43.00	44.00
EARTH Diatomaceous see Kieselguhr			
Egg Yolk, 200 lb cs	lb	.72	.74
Water Gums Dark, 280 lb bbls	lb	.13¾	.14
Light, 280 lb bbls	lb	.14	.14¼
Fish Scrap, dried wks	unit	4.15	& .10
Acid Bulk 7 & 3½ Deliv Norfolk & Balt basis	unit	3.50	& .50
Flavine Lemon 55 lb cs	lb	.90	.95
Orange 70 lb cs	lb	.85	.90
Fossil Flour	lb	.02½	.04
Fustic, solid 50 lb boxes	lb	.20	.23
Crystals, 100 lb boxes	lb	.20	.22
Liquid, 51° 600 lb bbls	lb	.09	.10
Fustic, sticks	ton	30.00	32.00
Chips	lb	.04	.05
Gall extract	lb	.20	.21
Gambier 25% liq., 450 lb bbls	lb	.12	.14
Common 200 lb cases	lb	.08	.09
Singapore cubes, 150 lb bags	lb	...	.23
Gelatin Technical 100 lb cs	lb	.45	.50
Glucose (Grape Sugar) dry 70° bags c-l NY 100 lb		3.14	3.24
80° bags c-l NY 100 lb		3.24	3.34
Tanners' Spcl 100 lb bgs 100 lb		...	3.14
GLUE, pure white bbls	lb	.22	.26
Medium white, bbls	lb	.20	.24
French bbls	lb	.18	.25
High Grade, bbls	lb	.35	.40
Bone, regular, bbls	lb	.10	.12
Fish bbls	gal	1.50	1.75
Hide bbls	lb	.14	.24

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Granular, Large, Medium and Small Crystals

Southern Agricultural Chemical Corporation
General Sales Offices
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ATLANTA GEORGIA

Gums
Oak Bark

Industrial Raw Materials

Osage Orange
Whiting

GUM, Accroides, Red, coarse and fine, 140-150 lb bags		.03¾	.04½
Powdered, 150 lb bgs	lb	.06	.06½
Accroides, Yel. 150-200 lb bgs	lb	.18	.20
Animi (Zanzibar) Bean and pea 250 lb cases	lb	.40	.45
Glassy, 250 lb cases	lb	.60	.65
Asphaltum, Barbadoes, Manjak 200 lb bags	lb	.09	.12
Egyptian, 200 lb cases	lb	.15	.17
Gilsonite selects 150 lb bgs	ton	55.00	60.00
Benzoin, Sumatra, Tech., 120 lb cases	lb	.30	.32
Copal, Congo, 112 lb bags Water White,	lb	.35	.36
Light Amber,	lb	.12½	.14
Dark Amber,	lb	.08¾	.09
Clean Opaque	lb	.12	.13
Copal, East Indian 224 lb cases 180 lb bags— Pale, E. I. Bold	lb	.17	.17½
Pale, E, I, Chips	lb	.07½	.08
180 lb bags— Copal, Manila, 180-190 lb Baskets— Pale Bold, Loba A,	lb	.16	.16½
Pale Bold, Nubs, Loba B	lb	.15	.15¼
Pale, Bold, Loba C	lb	.14½	.15
Pale Nubs, P. N.	lb	.14	.14½
Pale Bold, 224 lb cases	lb	.16	.18
Copal, Pontianak, 24 lb cases— Pale, Bold, genuine No. 1	lb	.28	.28½
Pale, genuine split chips	lb	.19	.19½
Damar, Batavia standard 136 lb cases	lb	.25½	.26
Batavia E Seeds 136 lb cs	lb	.18½	.19
Batavia F Splinters 136 lb cases and bags	lb	.09	09½
Batavia, Dust, 160 lb bags	lb	.07	.07¾
Singapore No. 1 224 lb cs	lb	.34	.36
Singapore No. 2, 224 lb cs.	lb	.21	.21½
Singapore No. 3, 180 lb bgs	lb	.11	.11½
Elemi, No. 1, 80-85 lb cs	lb	.14	.15
No. 2, 80-85 lb cases	lb	.13	.14
No. 3, 80-85 lb cases	lb	.11	.13
Kauri No. 1, 224-226 lb cs	lb	.67½	.68
No. 2, fair pale 224-226 lb cases	lb	.44½	.45
Bush Chips 224 - 226 lb cases	lb	.42	.43
Pale Chips 224-226 lb cases	lb	.24½	.26
Brown Chips 180-200 lb bgs	lb	.14½	.16
Sandarac Prime quality 220 lb bags and 300 lb casks	lb	.25	.27
Graphite crude 220 lb bags	ton	15.00	35.00
Flake, 500 lb bbls	lb	.05	.09
HEMATINE, Paste, 500 lb bbls	lb	.09	.12
Crystals, 400 lb bbls		.12	.20
Hemlock, 25% 600 lb bbls wks	lb	.03½	.03¾
Bark	ton	...	16.00
Hypernic, 51° 600 lb bbls	lb	.12	.15
Indigo Madras bbls	lb	1.28	1.30
20% paste drums	lb	.14	.15
Japan Wax 224 lb cs	lb	.29	.33
KIESELGUHA, 95 lb bags NY	ton	60.00	70.00
Larch 25% 600 lb bbls wks	lb	.03¾	.04
Powd., 100 lb bags wks	lb	.08	.09
Logwood 51° 600 lb bbls	lb	.08¼	.08½
Lower grades	lb	.07½	.08
Solid, 50 lb boxes	lb	.12	.15
LOGWOOD sticks	ton	26.00	27.00
Chips 150 lb bags	lb	.03	.03½
Madder, Dutch	lb	...	.30
Mangrove, 55% 400 lb bbls	lb	.03½	nom.
Mangrove, bark, African	ton	...	36.00
Marble Flour, bulk	ton	10.00	12.00
See also Calcium Carbonate under Chemicals			
Montan Wax, crude bags	lb	.06½	.07
Bleached bags	lb	.24	.27
Myrobalans 25% liquid bbls	lb	.04	.04¾
50% solid, 50 lb boxes	lb	.08	.08¾
Myrobalans, bags J1	ton	43.00	44.00
R2	ton	30.00	31.00
J2	ton	31.00	32.00
Nitrogenous Material bulk	unit	...	3.60
NUTGALLS, Chinese, bags	lb	.17	.18
Aleppy bags	lb	.25	nom.
Powd. bags	lb	.22	.24
Oak bark, whole	ton	20.00	23.00
Ground	ton	45.00	50.00
Oak, tanks wks	lb	...	.03½
23-25% liq. 600 lb bbls wks	lb	.04	.04½
Solid, powd	lb	.07½	.08
Osage Orange 51° liquid	lb	.07	.07½
Powd, 100 lb bags	lb	.14½	.15
Crystals	lb	.16	.17
Paracoumarone, 230 lb. drums	lb	.12	.15
Paraffin, ref'd. 200 lb. cs slabs 118-120 deg. M.P.	lb	.08	.09
123-127 deg. M.P.	lb	.06½	.06¾
128-132 deg. M.P.	lb	.07½	.07¾
133-137 deg. M.P.	lb	.08	.08½
138-140 deg. M.P.	lb	.08¾	.10
Phosphate Acid, 16% Bulk wks unit		.62½	.65
Phosphate Rock, fob., mines Florida Pebble 68%	ton	3.00	3.35
Florida Pebble 70%	ton	3.50	3.65
Florida Pebble 72%	ton	3.85	4.00
Florida Pebble, basis 75%-74%		...	5.35
Florida Pebble, 75%		...	5.60
Florida Pebble, basis 77%-76%		...	6.00
Tennessee, 72%	ton	...	5.50
Pine Oil, stm., dist. bbls	gal	...	.66
Destructive dist.	lb	.63	.64
Prime	bbl	8.60	10.60
Plaster Paris, tech., 250 lb bbls	bbl	...	3.30
Pumice Stone, lump, 250 lb bbls	lb	.04½	.06
Lump, bags	lb	.04	.05
Powdered, 350 lb bbls	lb	.03½	.03
QUEBRACHO, 35% liquid tks	lb	.03	.03¼
450 lb bbls c-l		.03¼	.04
35% bleaching, 450 lb bbls	lb	.04	.05
Solid 63% 100 lb. bales cif.	lb	.04½	.04¾
Clarified, 64% bales	lb	...	.05
Quercitron, 51° 450 lb bbls	lb	.03½	.07
Solid, 100 lb. boxes	lb	.10	.13
Quercitron, bark, rough	ton	...	14.00
Ground	ton	34.00	35.00

Rosins, (Solid in 600 lb bbls gross for net)

B,	12.25	I,	13.00
D,	12.35	K,	15.00
E,	12.55	M,	15.25
F,	12.85	N,	15.75
G,	12.90	WG,	16.90
H,	12.90	WW,	18.60

(Sold in 600 lb bbls net, quotations based on a unit of 280 lb)

Rosin Oil first run 50 gal bbls	gal	...	.66
Second run bbls	gal	...	.69
Rotten Stone lump imp. bbls	lb	.07	.08
Lump selected, bbls	lb	.09	.12
Powdered, bbls	lb	.03	.05
Domestic bags mines		24.00	30.00
Sago Flour 150 lb bags	lb	.04¼	.05
Shellac, T.N., bags	lb	.46	.47
Superfine bags	lb	.50	.51
Garnet, bags	lb	.45	.46
Bone dry, bags	lb	.55	.56
Spruce, 25% liquid tanks, wks	lb	.01	.01½
bbls	lb	...	.01¾
Powd. 50% 100 lb bags wks	lb	.03	.03¼
Starch, rice, 140 lb bags	lb	.09	.10
Powd. 140 bgs. c-l	100 lb	...	3.22
Bags lc-l	100 lb	...	3.32
Pearl, 140 lb bags	100 lb	...	3.12
Bags lc-l	10 lb	...	3.22
Potato domestic, 200 lb bgs c-l	lb	.04¾	.05
Imported bags duty paid	lb	.06¼	.06½
Wheat, dom., thick bags	lb	.06½	.07
Thin, bgs	lb	.09¼	.10
Sol. Potato	lb	.06	.06½
Sumac, extract, liq 450 lb bbls	lb	.05	.06
CP., 450 lb bbls	lb	...	.10¼
Stainless, 600 lb bbls	lb	.11	.11½
Sumac, Sicily leaves 100 lb bags	ton	130.00	nom.
Ground shipment	ton	75.00	78.00
Virginia, 150 lb bags	ton	55.00	60.00
TALC, Italian 220 lb bags NY	ton	40.00	50.00
Refined, white bags	ton	50.00	55.00
French, 220 lb bgs NY	ton	30.00	35.00
Refined, white bags	ton	35.00	45.00
Dom., crude, 100 lb. bags NY	ton	12.00	15.00
Refined 100 lb bags NY	ton	16.00	18.00
Tankage, ground NY	unit	4.15	& .10
High grade fob Chicago	unit	4.35	& .10
So. Am. cif	unit	4.00	& .10
Tapioca Flour, high grade bgs	lb	.04¼	.04½
Medium grade, bgs	lb	.03½	.03¾
Low grade, bags	lb	.03	.03¼
Tar, Kiln-burnt	bbl	...	14.00
Retort bbls	bbl	...	13.50
Tripoli, 500 lb. bbls	100 lb	2.50	3.00
Turpentine Spirts, bbls	gal	.86	.91¼
Wood steam Dist. bbls	gal	.76	.81¼
Valonia Cups 30-31% tan	ton	39.00	40.00
Beard, 42% tan bags	ton	58.00	59.00
Mixture Bark bags	ton	43.00	44.00
Wattle Bark, bags	ton	50.00	51.50
Extract 55% dble bgs ex-dock	lb	...	.05¾
Whiting 200 lb bags c-l wks 100 lb.		...	1.25
Alba bags NY c-l	ton	...	13.00
Gilders, bags NY c-l	100 lb.	...	1.35

Gum Copal—Supplies here are not particularly but the continued spotty buying forced reductions last week on pale East Indian bold to 17c@17 1/2c lb.

Gum Sandarac—Higher replacements were noted in dispatches from abroad. This has not caused any advance in the local market which is still quoted at 25c@26c lb.

Japan Wax—There is a difference of opinion among the sellers here as to the spot market with quotations ranging from 28c@33c lb. Available parcels here are scarce and while the market is very firm, replacements are said to be offered at considerable reductions from the above prices.

Myrobalans—Routine on this market and for shipment. J2's are fractionally lower at $30.50@$32.00 ton for futures, with the other grades unchanged.

Rosin—Sharp advances in the common grades and increases of lesser degree in the fine grades featured the movement of this market last week. Sellers look to a continued firm market with the diminishing receipts at the primary markets until the new season. Current quotations are: B, $12.25; D, $12.35; E, $12.55; F, $12.85; G, H, $12.95; I, $13.00; K, $15.00; M, $15.25; N, $15.75; WG, $16.90; WW, $18.60.

Starch—Domestic makers announce lower prices for this year of 20c per 100 pounds. However the custom of granting 20c per 100 lbs. allowance has been discontinued, so the net price shows no change from last year. Sales are in good volume.

Tankage—Locally the market was very quiet and unchanged and there are no reports of activity in other markets worthy of comment. South American is quiet following the recent sharp decline to $4.00 and 10c unit.

Turpentine—Locally the market is higher this week with some business passing at 86c@91 1/2c gal. Most of the activity is in the South where the market is firm and higher.

Valonia—Beards continue at their firm position of the past two weeks with curtailed offerings coming forward from primary markets. The market on beards is held at $58.00@$59.00 ton for shipment.

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GROUND—LIQUID

Soda Ash

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DENSE

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Announcement

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has taken over its own SALES and DISTRIBUTION in the NEW YORK-METROPOLITAN DISTRICT, including Northern New Jersey, and has organized a direct Sales Division for this territory.

Local Warehouses have been established, from which it will distribute all types and formulae of COMPLETELY DENATURED and SPECIALLY DENATURED and PURE (Taxpaid) ALCOHOL to industrial users and permit holders.

This broadened policy will insure users of its products the highest standard of quality, fresh goods and best service. **Inquiries solicited.**

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Kentucky Alcohol Corporation

New York Sales Division
KENTUCKY ALCOHOL CORPORATION
30 BROAD STREET NEW YORK CITY
Telephone Hanover 9540

Import Manifests

Heavy Chemicals and Other Industrial Raw Materials.

IMPORTS AT NEW YORK

Dec. 31 to Jan. 6

ACIDS—Formic, 79 cbys., F. Rudolff, Rotterdam; **Tartaric,** 100 bbls., French American Bank, Marseilles; **Tetrachlorphtal,** 5 cks., Grasselli Dyestuff Corp., Rotterdam

ALCOHOL—Denatured, 163 drs., J. C. Browne, St. Croix; **Methyl,** 600 drs., Kuttroff Pickhardt & Co., Rotterdam

AMMONIUM—Bicarbonate, 39 cks., H. Hinrichs Chemical Corp., Rotterdam; **Citrate,** 4 cs., Merchants Dispatch Transport Co., London; **Muriate,** 60 cks., Kuttroff Pickhardt & Co., Rotterdam

ANTIMONY—[illegible] cs., Lo Curto & Funk, Barcelona; **Oxide,** 1,414 bgs., Watson, Geach & Co., Antofagasta; **Regulus,** 550 cs., Order, Hamburg; **Sulfide,** 1,429 cs., Watson, Geach & Co., Antofagasto; **Sulphur,** 4 kgs., Merck & Co., Buenaventura; **Sulphuret,** 18 cks., General Rubber Co., London

ARSENIC—75 bbls., Order, Tampico; 5 cs., Rhodia Chemical Co., Yokohama

BARIUM—Chloride, 70 cks., Th. Goldschmidt Corp., Rotterdam

BARYTES—3,000 bgs., Order, Genoa

CASEIN—834 bgs., Guaranty Trust Co., Buenos Aires; 118 bgs., Order, Hamburg

CHALK—600,000 kilos, K. N. Fox, Dunkik; 500 kilos, J. W. Higman & Co., Dunkirk

CHEMICALS—5 cs., Superfos Co., Hamburg; 16 cks., Irving Bank Columbia Trust Co., Hamburg; 25 cs., American Exchange National Bank, Hamburg; 10 cks., Agfa Products Co., Inc., Hamburg; 2 cs., Johnson & Sons, Ltd., London; 195 cks., Roessler & Hasslacher Chemical Co., Rotterdam; 80 balloons, Roessler & Hasslacher Chemical Co., Rotterdam; 100 cks., 225 cs., Van Geisten, Rotterdam; 6 cs., Ladenburg, Thalman & Co., Rotterdam; 79 cks., A. Klipstein & Co., Rotterdam 78 cks., Roessler and Hasslacher Chemical Co., Bremen; 75 bbls., W. Schall & Co., Bremen; 139 cks., A. Klipstein & Co., Bremen; 29 cks., Order, Bremen; 400 bbls., Roessler & Hasslacher Chemical Co., Antwerp; 50 cs., H. Hinrichs Chemical Corp., Rotterdam; 75 cs., American Bluefriesveen, Inc., Rotterdam; 200 bgs., P. Uhlich & Co., Rotterdam; 153 cks., 565 bgs., Rhodia Chemical Co., Rotterdam; 50 cks., H. A. Metz Laboratories, Rotterdam; 1 cs., Mallinckrodt Chemical Corp., Rotterdam; 102 cks., Th. Goldschmidt Corp., Rotterdam; 78 cks., Hummel & Robinson, Rotterdam; 7 cks., General Dyestuff Corp., Rotterdam; 38 cs., Order, Rotterdam; 23 cks., H. Sundheimer, London; 56 cs., State Forwarding & Shipping Co., Havre; 2 cs., Order, Havre.

CHEMICAL COMPOUND—100 drs., Lo Curto & Funk, Hamburg

CINNABAR—3 cs., A. Hurst & Co., Genoa; 14 cs., A. Hurst & Co., Leghorn

COAL TAR—Distillate, 35 drs., Tar Acid Refining Corp., Liverpool; 125 drs., Order, Liverpool; 98 drs., Order, Liverpool

COBALT—Oxide, 5 cks., Perry Ryer & Co., Liverpool

COLORS—1 cs., Rohner Gehrig, Liverpool; 81 pgs., General Dyestuff Corp., Rotterdam; 3 cs., Order, London; 12 cks., Carbic Color & Chemical Co., Havre; 67 pgs., Ciba Co., Havre; 63 cks., 1 jug, General Dyestuff Corp., Rotterdam; 20 cks., General Dyestuff Corp., Rotterdam; 6 cks., General Dyestuff Corp., Hamburg; 6 bb's., Bank of Manhattan Co., Antwerp; 4 bb's., Irving Bank-Columbia Trust Co., Antwerp; 6 bbls., Equitable Trust Co., Antwerp; 27 cks., Geigy Co., Antwerp; 3 cs., P. C. Kuyperto Co., Liverpool; **Bronze,** 7 cs., Order, Hamburg; 21 cs., Phoenix Shipping Co., Hamburg; 19 cs., B. F. Drakenfeld & Co., Bremen; 11 cs., American Express Co., Bremen; 7 cs., Order, Bremen; 1 cs., Order, Antwerp; **Coal Tar,** 2 cs. 110 cks., General Dyestuff Corp., Rotterdam; 11 cks., Grasselli Dyestuff Corp., Rotterdam; **Earth** 52 cks., Fezandie & Sperrle, Bremen; 44 cks., C. J. Osborn, Bremen

COPRA—36 bgs., I. Baker Co., San Andres

DEGRAS—25 bbls., Order, Liverpool;

DIVI DIVI—700 bgs., R. Desvernine, Curacao; 1,100 bgs., Selma Mercantile Corp., Maracaibo

EARTH—86 cks., Order, Genoa; 29 cks., J. L. Smith & Co., Leghorn; 100 bis., E. E. Marks Co., Leghorn

EPSOM SALTS—100 kgs., Lo Curto & Funk, Hamburg; 10 cs., American Hawaiian S. S. Co., London; 500 bgs., A. Klipstein & Co., Bremen; 500 bgs., Th. Goldschmidt, Bremen; 1,000 bgs., Order, Bremen

EXTRACTS—Logwood, 16 bbls., Domingo Dyewood Corp., Monte Cristi; **Quebracho,** 39,525 bgs., The Tannin Corp., Buenos Aires; **Tanjarin,** 2 cs., Gonzales, Rubio & Co., Pacasmayo

FERRO MANGANESE—180 cks., De Courcy Browne, Havre

FULLERS EARTH—650 bgs., L. A. Salomon & Bros., London

GELATINE—10 cs., J. P. Smith & Co., Tuscania; 60 cs., American Express Co., Rotterdam

GLUE—45 bgs., Gallagher & Ascher, London; 28 bbls., Order, Hamburg; 200 bgs., National Gum & Mica Co., Tuscania; 101 cs., L. W. Ferdinand & Co., London; 150 cks., Order, Constanza; **Bone,** 150 bgs., H. L. Lederer, Rotterdam;

GUMS—432 bgs., United Piece Dye Works Marseilles; **Adragante,** 4 sks., A. D. Isbetcherian, Constantinople; 3 cs., H. Norton, Marseilles; **Chicle,** 33 bls., O. Gerdan & Co., Progreso; 27 bdls., O. Gerdan & Co., Progreso; **Copal,** 34 bgs., K. Hertig, Manila; 273 bgs., Chemical National Bank, Antwerp; 280 bgs., W. Schall & Co., Antwerp; 375 bgs., Chatham & Phoenix National Bank, Antwerp; 413 bgs., Capital National Bank, Antwerp; 1,215 bgs., 500 bgs., Paterson, Boardman & Knapp, Antwerp; 21 bgs., P. S. Busschaert, Antwerp; 400 bgs., W. Schall & Co., Antwerp; 500 bgs., United National Bank, Antwerp; 373 bgs., Order, Antwerp; **Damar,** 100 cs., Bank of Manhattan Co., Batavia; **Elemi,** 135 bgs., Grace National Bank, Manila; **Tragacanth,** 10 bgs., Order, Hamburg; 6 bgs., Brown Bros. & Co., London; 63 bgs., Orbis Products Trading Co., London; 46 cs., Thurston & Braidich, London; 40 bgs., W. Mohrmann, Inc., London

IRON OXIDE—38 cks., J. H. Rhodes & Co., Liverpool; 33 cks., Wishnick, Tumpeer Chemical Co., Liverpool; 17 cks., Reichard. Coulston, Inc., Liverpool; 8 cks., Reichard. Coulston, Inc. Tuscania

LACTIC POWDER—100 cs., J. Personleni, Genoa

LIME—Chlorinated, 25 cs., H. Kohnstamm Co., Liverpool; 115 cs., American Express Co., Liverpool

MAGNESITE—63 bbls., A. Kraemer & Co., Rotterdam

METHYL—Chloride, 2 cyls., Kuttroff, Pickhardt & Co., Rotterdam

MICA—5 cs., Globe Shipping Co., Liverpool; 2 cs., Brown Bros. & Co., London

OCHRE—100 bbls., Wishnick, Tumpeer Chemical Co., Marseilles; 230 bbls., Scott L. Libby, Marseilles; 66 bbls., L. H. Butcher & Co., Marseilles

OILS—Cod, 30 cks., R. Badcock & Co., St. Johns; **Olive,** 100 cs., Cosinio Daniele, Genoa; 100 cs., D. Trozzio Co., Genoa; 600 cs., J. P. Smith & Co., Marseilles; 100 cs., J. Garneau & Co., Marseilles; 100 drs., Webster & Atlas National Bank, Alicante; 80 cs., Lazard Freres, Marseilles; 100 cs., F. Altomare, Naples; 107 cs., Gallagher & Ascher, Palermo; 100 cs., Reggio Import Co., Palermo; 150 cs., D. Guillio, Genoa; 100 cs., P. Pastene & Co., Genoa; 2,640 cs., Order, Genoa; 50 cs., F. Romeo & Co., Genoa; 100 cs., D. Trozzo & Co., Genoa; 100 cs., Cosimo Daniele, Genoa; 200 cs., B. Bendin Genoa; 500 cs., S. Galle & Co., Genoa; 550 cs., Sausage Manufacturing Co., Genoa; 100 cs., G. Cresci, Genoa; 100 cs., B. Bendin, Genoa; 100 cs., Molineli, Giannusa & Rao, Genoa; **Olive Oil Foots,** 200 bbls., Banca Commerciale, Catania; **Rape,** 335 drs., Mitsui Bussan Kaisha & Co., Kobe; **Sesame,** 100 bbls., Fischer, Holinshed Co., Hamburg; 2 cs., Kalagin Bros., Kobe; 100 cs., J. C. Francesconi & Co., Rotterdam; 6 cs., Order, Beirut **Sulphur,** 100 bbls., H. W. Peabody & Co., Catania; **Wood** 54 drs., D. Antolini & Co., Hongkong,

OSSEINE—79 bgs., American Glue Co., Marseilles; 400 bgs., Order, Marseilles

PHOSPHATE— Bone, 1,000 bgs., Farmers Loan & Trust Co., Antwerp

POTASSIUM SALTS—Caustic, 6 drs., Superfus Co., Hamburg; **Chlorate,** 100 cks., Seaboard National Bank, Hamburg; **Metabisulfite,** 25 bbls., Superfos Co., Genoa; **Nitrate,** 1 cs., Rohner Gehrig & Co., Hamburg.

QUICKSILVER—43 flasks, Haas Bros., Tampico; 300 flasks, Haas Bros., Alicante

ROSIN—21 bbls., Dominican Naval Stors, Monte Christi

SAL AMMONIAC—260 cks., Superfos Co., Rotterdam

SHELLAC—76 bgs., Ralli Bros., Hamburg; **Seedlac,** 100 bgs., Ralli Bros., Calcutta; 100 sks., American Exchange Bank, Calcutta

SILVER—Sulfide, 47 cs., Watson Geach & Co., Antofagasta; 5 cs., Goldsmith & Co., South Pacific Ports

SODIUM SALTS—Acetate Anhydrous, 192 drs., Grasselli Dyestuff Corp., Hamburg; **Cyanide,** 1,120 cans, C. Hardy, Inc., Havre; **Nirate,** 70 tons, Order, Bordeaux; 508 bgs., Kuttroff, Pickhardt & Co., 7,958 bgs., W. R. Grace & Co., Iquique; **Sulfate,** 46 cks., Order, Rotterdam; **Sulfite,** 54 drs., H. Hinrich Chemical Co., Rotterdam

SUMAC—350 bgs., R. Neumann & Co., Messina; 350 bgs., Order, **Messina;** 210 bgs., Irving Bank-Columbia Trust Co., Palermo; 285 bls., Order, Palermo 1,470 bgs., Order, Palermo.

TALC—200 bgs., Order, Genoa; 200 bgs., National Bank of N. Y., Genoa; 35 cs., Markwell Manufacturing Co., Bordeaux; 500 bgs., 10 cs., L. A. Salomon & Bros., Bordeaux; 500 bgs., Hammill & Gillespie, Bordeaux; 200 bgs., C. B. Chrystal & Co., Bordeaux; 400 bgs., L. A. Salomon & Bro., Genoa; 1,000 bgs., C. Mathieu, Genoa; 200 bgs., Kountze Bros., Genoa; 1,000 bgs., C. Mathieu, Inc., Genoa

TARTAR—39 bgs., American Bluefriesveem, Inc., Bordeaux; 131 sks., Royal Baking Powder Co., Lisbon; **Cream,** 75 bb's., Standard Bank, Marseilles; 140 bbls., J. Munroe & Co., Marseilles

TARTRATE—174 bgs., C. Pfizer & Co., Marseilles; 200 bgs., Royal Baking Powder Co., Marseilles

TURPENTINE—8 drs., Dominican Naval Stores, Monte Cristi

WAX—17 bgs., J. J. Julia & Co., Azua; 1 bg., Selma Mercantile Corp., Azua; 37 bgs., Mecke & Co., Azua; 12 bgs., J. J. Julia and Co., Barahona; 10 cakes, W. Schall & Co., Puerto Plata; 2 serrons, J. J. Julia and Co., Monte Cristi; 8 cs., J. W. Warnecke, Rotterdam; **Bees,** 84 bgs., D. Steengrafe Santiago; 10 bgs., T. J. Owen & Co., Santiago; 51 bgs., Order, Manzanillo; 144 pgs., D. Bacon, Liverpool; 35 bgs., Order, Smyrna; **Candililla,** 24 sks., Order, Liverpool; 20 bgs., Order Tampico

WHITING—200 bgs., E. L. Bullock & Sons, Inc., Havre; 2,000 bgs., C. B. Chrystal & Co., Havre; 2,000 bgs., L. Scott Libby Corp, Havre

ZINC—Oxide, 70 bb's., Philipp Bros., Antwerp; 25 cks., African Metal Corp., Rotterdam; 40 cks., Smith Chemical & Color Co., Rotterdam

IMPORTS AT SAN FRANCISCO

Dec. 25 to Jan. 1

ACID—15 cks., Order, Rotterdam

ANTIMONY—200 cs., International Banking Corp., Hankow

COPRA—291 sks., Wightman, Crane & Co., Papeete; 430 sks., Pacific Cocoanut Co., Papeete; 6,738 sks., Kidder, Peabody Acceptance Corp., Papeete; 1,670 sks., O'Connor, Harrison & Co., Papeete

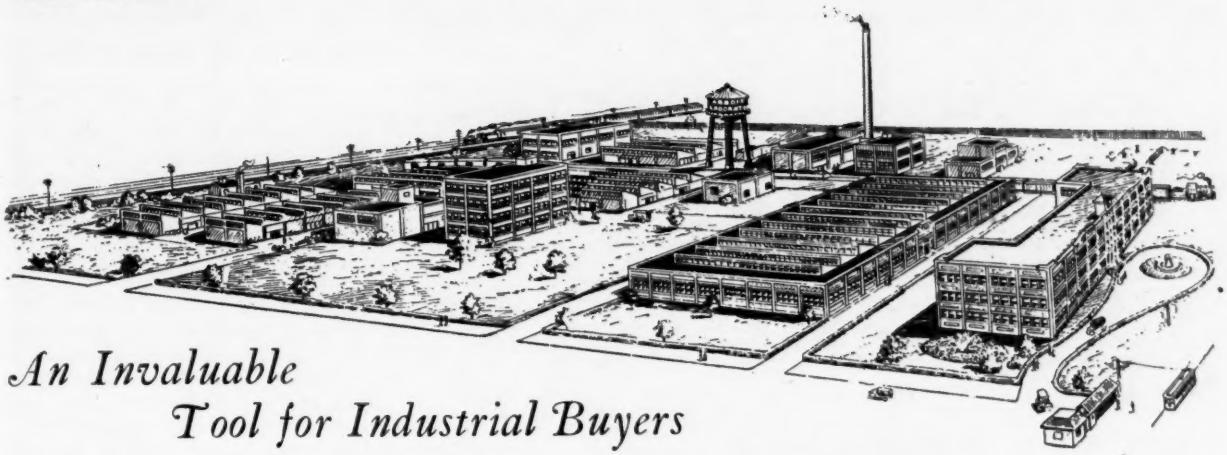
FULLERS EARTH—200 bags, Balfour, Guthrie & Co., London

OIL—Cod Liver, 30 bbls., Raymond Company, Rotterdam

TAPIOCA—Pearl, 350 bgs., H. M. Newhall & Co. Nenang

IMPORTS AT BALTIMORE

AMMONIA—Phosphate, 1 bbl., 680 lbs., F. H. Shallus Co., Essex County, Hamburg



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BLOOD—Dried, 812 bgs., 100,191 lbs., F. H. Shallus Co., West Keene, Buenos Aires
BONE MEAL—2,972 bgs., 456,800 lbs., R. C. N. Rukert, West Keene, Buenos Aires
BONES—2,464,000 lbs., Swift & Co., West Keene, Buenos Aires
CHEMICALS—250 bgs., 55,550 lbs., F. H. Shallus Co., Essex County, Hamburg
CRACKLINGS—277 bgs., 68,101 lbs., H. J. Baker & Bro., West Keene, Buenos Aires
HYDRATED MANGANESE OXIDE—1 ck., William H. Masson, City of Flint, London
IRON—Chloride, 50 cks., 25,080 lbs., William H. Masson, Essex County, Hamburg
LIMESTONE—3,500 tons, Bethlehem Steel Corp., Berwindmore, Felton
ORE—Iron, 11,000 tons, Bethlehem Steel Corp., Feltcre, Cruz Grande; 10,000 tons, Bethlehem Steel Corp., Cubore, Cruz Grande; 5,500 tons, Bethlehem Steel Corp., Berwindmore, Felton
MANGANESE—8,000 tons, United States Steel Products Co., Circinus, Rio de Janeiro
PHARMACEUTICAL PRODUCTS—5 drs., 1,597 lbs., Baltimore & Ohio Railroad, Essex County, Hamburg
POTASH—Kainit, 58 084 lbs., F. H. Shallus Co., Essex County, Hamburg; 101,900 lbs., Potash Importing Corp., Essex County, Hamburg; **Manure Salt,** 502,234 lbs., F. H. Shallus Co., Essex County, Hamburg; **Muriate,** 2,000 bgs., 401,720 lbs., F. H. Shallus Co., Essex County, Hamburg; 750 bgs., 150,711 lbs., Potash Importing Corp., Essex County, Hamburg; 200 bgs., 40,190 lbs., F. H. Shallus Co., Essex County, Hamburg; **Sulphate,** 1,000 bgs., 100 tons, F. H. Shallus Co., Essex County, Hamburg; 50 bgs., 10,047 lbs., Potash Importing Corp., Esesx County, Hamburg; 500 bgs., 50 tons, F. H. Shallus Co., Essex County, Hamburg
POTATO FLOUR—100 bgs., 22,000 lbs., William H. Masson, Essex County, Hamburg
SEED—Canary, 393 bgs., 55,000 lbs., F. H. Shallus Co., West Keene, Buenos Aires
SODA—Nitrate, 203 sks., 122,368 lbs., Kuttroff, Pickhardt & Co., Essex County, Hamburg

IMPORTS AT PHILADELPHIA

Dec. 28 to Jan. 5

ACID—Formic, 74 crbys., Kali Mfg. Co., Hamburg; 84 demijohns, Order, Hamburg; **Phosphoric,** 80 crbys., F. B. Vandegrift & Co., Hamburg
AMMONIA—Muriate, 40 cks., Order, Rotterdam; **Nitrate,** 353 cks., Order, Hamburg
AMMONIAC—Sal, 95 cks., Order, Hamburg; 14 bbls., Order, Hamburg
ARSENIC—Red, 50 cks., Order, Hamburg
BARYTES—1 cs., Chas. Kutz & Co., Inc., Hamburg
BAUXITE—Iron Ore, 510,000 kilos, Bank of America, Rotterdam **Residue,** 746,380 kilos, Franklin Fourth St. Nat. Bank, Hamburg
CHALK—600 bgs., Am. Exchange Pacific Nat. Bank, Antwerp; 900 bgs., Chatham Phenix Nat. Bank & Trust Co., Antwerp; 2,100 bgs., Chatham Phenix Nat. Bank & Trust Co., Antwerp; 200 bgs., Order, Antwerp
CHEMICALS—42 bb'ls., Order, Hamburg; 10 cs., Order, Hamburg; 73 crts., Order, Hamburg; 1 kg., Order, Hamburg; 775 drs., E. H. Bailey & Co., London; 1 drm., Order, Hamburg; 54 bbls., Order Hamburg; 100 drs., Order, Hamburg; 2 cs., Order, Hamburg; 21 cks., Order, Rotterdam; 2 cks., Order, Bremen
CHLORATE—Kalium, 75 cks., Irving Bank & Trust Co., Hamburg; 2,400 cks., Irving Bank & Trust Co., Hamburg; 2,400 cks., Irving Bank & Trust Co., Hamburg
CLAY—701 tons, Moore & Munger, Bristol; 445 tons, Moore & Munger, Bristol; 120 tons, J. W. Hampton, Jr., & Co., Bristol; 100 tons, Hammill & Gillespie, Bristol; 443 tons, Paper Makers Importing Co., Bristol; 376 tons, Order, Bristol; **Raw,** 25 cks., Order, Bremen
EXTRACT—15 cks., Am. Dyewood Co., Havre
FERTILIZER—Clay, 35 bgs., O. G. Hempstead & Son., London
FLUORSPAR—100,780 kilos, Order, Bremen; 1,322,000 kilos, Order, Bremen
GLYCERINE—10 cks., Harshaw, Fuller & Goodwin Co., Marseilles; 26 cks., Order, Marseilles; 55 cks., Order, Marseilles; 79 cks., Oder, Marseilles; 10 cks., Order, Havre; 46 cylinders, Order, Havre; 60 drs., Harshaw, Fuller & Goodwin Co., Rotterdam; **Crude,** 60 drms., Harshaw, Fuller & Goodwin Co., Rotterdam; **Dynamite,** 57 drs., Order, Hamburg
GUM—Sandarac, 38 bbls., Franklin Fourth St. Nat. Bk., Casa Blanca
KALIUM—Chloride, 750 bgs., Potash Importing Co., Bremen
LINSEED—92,049 bgs., Order, Rosario; 30,746 bgs., Order, Buenos Aires
MAGNESIUM—Chloride, 36 drs., Order, Hamburg
MANURE—Chemical, 35 bgs., Henry A. Dreer, Inc., London; **Nitrogenous,** 1,000 bgs., Order, Antwerp
MEAL—Bone, 1,654 bgs., Order, Rotterda
MOLASSES—733,641 gals., Eastern Alcohol Corp., Sagua & Havana
MOSS—Peat, 450 bgs., Order, Bremen
OIL—Olive, 1 bbl., Michele D'Agostino; Naples; 150 cs., Order, Naples
ORE—Chrome, 4,800 tons, E. J. Lavino & Co., Beira; **Iron,** 7,075,600 kilos, Buck, Kaier & Co., Narvik; **Manganese,** 4,959 tons 3 cwt 2 qrs., E. J. Lavino & Co., Secondee
OSSEINE—1,146 sks., Order, Havre
OXLET—Kalium, 50 cks., titan, O. G. Hempstead & Son, Hamburg
OXIDE—Zinc, 2 bbls., Philipp Bros., Antwerp
POWDER—Aluminum, 13 pkgs., Rohner, Gehrig & Co., Bremen
POTASH—Carbonate, 15 bbls., Brown Bros. & Co., Hamburg; **Caustic,** 65 drs., Superfos Co., Inc., 23 drs., Order, Hamburg; **Chlorate,** 60 cks., E. T. Neilson, Hamburg; 100 kgs., Order, Hamburg; **Muriate,** 750 bgs., Potash Importing Co., Bremen; 1,250 bgs., Potash Importing Co., Bremen; 2,400 bgs., Societe Commerciale des Potasses d'Alsace, Antwerp; **Permanganate,** 50 drs., O. G. Hempstead & Son, Antwerp; **Sulfate,** 500 bgs., Potash Importing Co., Bremen
ROCK—Gypsum, 2,950 tons, Penna Gypsum Co., Ingonish
SALTS—Epsom, 200 bbls., Phila.-Girard Nat Bank, Hamburg; 500 bgs., Order, Bremen; **Manure,** 227,000 kilos, Potash Importing Co., Bremen
SOAP—Liquid, 5 pkgs., Boger & Crawford, Rotterdam
SODIUM—Phosphate, 11 cks., Order Rotterdam; **Prussiate,** 36 cks., Order, Hamburg
SYLVANITE—400 bgs., Societe Commerciale des Potasses d'Alsace, Antwerp
WHITING—29 bgs., Order, Antwerp; Powdered 4,400 bgs., Order, Dunkirk

IMPORTS AT NEW ORLEANS

Dec. 31, 1926, to Jan. 7, 1927

BONE MEAL—1,908 sks., Order, Bremen
BAUXITE—2,608 tons, Republic Mining Co., Georgetown; 2,455 tons, Republic Mining Co., Paramaribo;
BENZINE—7,058 tons, N. O. Refining Co. Curacao
CALCIUM—Chlorated, 147 cks., Order, Rotterdam
GLYERINE—100 cks., Order, Rotterdam
MOLASSES—1,300,000 gals., Order, Matanzas
OIL—Olive, 259 cs., Order, Genoa
SALTPETER—2,000 sks., Order, Bremen

IMPORTS AT BOSTON

Jan. 1 to Jan. 8

ACID—Oxalic, 100 cks., I. M. Sobin Co., Rotterdam
BARIUM CARBONATE—200 bls., Roya' Bank of Canada, Rotterdam
BUTTONLAC—100 cs., Rogers, Pyatt Shellac Co., Calcutta
CHALK—1,000 bgs., Hammill & Gillespie Co., Antwerp
COLOR—Aniline, 14 cs., Dyestuffs Corp of America, Liverpool; 10 **kgs.,** Dyestuffs Corp. of America, Liverpool; 3 cks., Dyestuffs Corp. of America, Liverpool
GARNETLAC—25 bgs., Order, Calcutta
GUM—Arabic, 50 bgs., Dillons, Ltd., Port Sudan
OIL—Cod, 4 bb's., A. W. Dodd Co., Yarmouth
POTASH—Nitrate, 11 cks., I. M. Sobin Co., Rotterdam
SEEDLAC—300 bgs., Rogers, Pyatt Shellac Co., Calcutta; 625 bgs., Order, Calcutta; 250 bgs., E. S. Parks Shellac Co., Calcutta; 1,500 bgs., Order, Calcutta
SHELLAC—75 chsts., Rogers, Pyatt Shellac Co., Calcutta; 60 bgs., Order, Calcutta
SODA—Nitrate, 5,069 bgs., Order, Iquique; **Phosphate,** 67 bb's., Order, Antwerp; **Sulphide,** 93 drs., I. M. Sobin Co., Rotterdam
STICKLAC—39 cs., Order, Singapore; 31 bgs., Order, Singapore
TRAGASOL—110 bbls., J. P. Marston Co., Liverpool
WOOLGREASE—150 bb's., F. W. Damon, Liverpool

SEEK NEW USES FOR LIME

National Lime Association is promoting use of lime in various branches of the steel industry and other manufacturing lines. New uses were discussed at conferences in Washington, last week, by technical and field men of the association. Topics included water softening and purification in municipal, industrial and railroad work; fluxing operations in open-hearth and electric furnaces; ammonia distillation, benzol purification and other by-product coke plant operations; lime in the manufacture of sand-lime brick; lime in the treatment of soda, sulfate and sulfite pulps, bleaching and coating and other phases of the paper industry; salt purification; treatment of sugar juices and sugar refining with lime; glass manufacture and its use of lime; de-hairing of hides; lime in the manufacture of calcium phosphate for baking powder and calcium carbide for acetylene gas.

FOR METRIC SYSTEM

Metric system for merchandising throughout the United States in 1935 is urged by American Chemical Society, National Wholesale Druggists Association, Institute of Radio Engineers and the National Research Council. More than 100,000 petitions urging metric legislation have been placed before Congress. The States of Illinois, California, Tennessee, North Dakota and Utah have petitioned Congress to adopt metric standards. The Pan-American Standardization Conference, to be held in the United States during 1927, is expected to emphasize the need for the world-uniform decimal metric measures in commerce.

German postwar production of brown coal tar, which is distilled for its yield of paraffin, fuel and motor oils, montan wax and trifling quantities of lubricants, amounts to 110,000 to 140,000 metric tons annually, according to Trade Commissioner W. T. Daugherty, Berlin. Lignite tar distillation has been developed since the outbreak of the war, while production of brown coal has risen from 87,000,000 tons in 1913 to 135,000,000 a year at present. Central German lignite distillation plants account for 50,000 to 60,000 tons of the annual production of tar, most of this output coming from Deutsche Erdoel A. G.

IN THE PRESS.

SOAP AND GLYCERINE MANUFACTURE

A MODERN TREATISE ON THE PRODUCTION OF SOAPS OF ALL KINDS, AND ON THE RECOVERY AND DISTILLATION OF GLYCERINE.

BY E. T. WEBB

DIRECTOR, THE BIDSTON SOAP COMPANY, LTD., MANCHESTER.

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[New Incorporations]

Cellucotton Products Co., Wilmington, Del.; $1 0,000; T. L. Croteau.

Federal Solvents Corp., New York; $20,000; paints and chemicals; S. B. Bloom, N. Urbach, H. B. Sala.

Petroleum Conservation Engineers, Inc., Elizabeth, N. J.; 2,500 shares, no par; chemical products; Francis G. Johnson, Herbert L. Johnson, Bertha A. Ward.

Textile Aerographing Corp., Union City, N. J.; $15,000; printing fabrics; Nicholas B. Topaloglou, George J. Braun, William L. Braun.

American Textile Dyers, Paterson, N. J.; $50,000 preferred, 500 shares, no par value; Dominick Abate, William Santora, Bernard J. Burke.

Thies Dyeing & Processing Co., Pawtucket, R. I., $50,000; John A. Bennett, Daniel J. Healy, Ira Marcus.

Pax Mfg. Co., New York; $10,000; chemicals, S. Jordan, F. A. Jordan, W. Claasen.

National Grain Yeast Corp., Belleville, N. J.; $100,000; William Aller, Eleanor Gill, Samuel Brass.

Spier-Sillons & Co., New York; $10,000; paste and glue; J. Oppenheim, M. Lustgarten, E. V. Raalte.

Interstate Zinc & Lead Co., Wilmington, Del.; $50,000,000; (500,000 shares without nominal or par value); T. L. Croteau, A. L. Miller, Alfred Jervis.

Hydrographic Products Co., New York, $150,000; paints and cements; O. R. Schultz, L. K. Detwiler, L. Freuder.

Lloyd Varnish Co., Maysville, N. C., $100,000.

Straw Paper Co. of Canada, Ltd., Edmonton, Alta. Can., $500,000 and 10,000 shares, no par; Geo. W. Taylor, Robert H. Harrison, Paul E. Poirier.

London Paper Box Co., Ltd., Montreal, Can., $100,000; Alexandre P. Mathieu, Armand Mathieu, Emma O'Hara.

Van Mfg. Co., Ltd., Windsor, Ont., Can.; manufacture chemicals; Horace R. Van Deursen, William E. Calnan, Norman J. Riordan.

Commonwealth Rubb er Co., Ltd., Montreal, Quebec, Can., $100,000 and 4,000 shares, no par; Mary C. Harris, Herbert D. McCuaig, Thomas A. Vipond.

Fertilizers & Feeds, Ltd., Toronto, Ont., Can., $40,000 and 1,000 shares, no par; manufacturers of fertilizers; Stuart Allan, Emma Staples, Lillian Dillon.

Shaler Co., Wilmington, Del., $18,000,000 (180,000 shares, without par value, of which 50,000 shall be Class "A" and 130,000 shares Class "B"); M. L. Rogers, L. A. Irwin, Wm. G. Singer.

Wetterwold & Pfister Co., New York, 1,000 shares, $100 each; 500 common, 300 Class "A", 200 Class "B", both common, no par; J. Pfister, R. H. Funke, J. H. Muller.

Rochester Lime & Cement Corp., Rochester, N. Y., $40,000; F. C. Lauer, W. F. Lauer, F. A. Lauer.

Allegheny Seaboard Oil Corp., Wilmington, Del., $100,000; mineral substances; S. L. Mackey.

National Process Illuminating Co., Weehawken, N. J., $15,000; deal in dye, colors, etc.; Anton Schmid, Henry W. Siebern, Walter H. Griffin.

Keebler & Co., New York, $100,000; make textiles; R. C. Keebler, G. F. Updike, E. H. Moore.

General Compounding Corp., New York, 5,000 shares, $10 each; 500 common, no par; chemicals; M. E. Areskeg, A. Saunders, J. L. Williams.

Tetrine Products, New York, $50,000; chemicals; L. N. Weiss, L. B. Hirsch, S. Hertz.

Bronx Finishing Corp., New York, 3,000 shares, $100 each; 2,000 common, no par; E. C. Myrick, R. D. Rice, C. M. Anderson.

Esther Oil Co., Wilmington, Del., $150,000; petroleum, asphaltum, minerals.

Castonia Cotton Yarn Co., Wilmington, Del., $100,000; cotton, silk, wool.

Wilbur Fire Extinguishers, New York, 250 shares, $100 each; 1,000 common, no par; M. Wilbur, D. R. Santomenna, H. D. Merchant.

Carvite Mfg. Co., Albany, N. Y., $5,000; automotive chemicals; S. Lascaris, J. Lascaris, H. J. Goldberg.

Muj & Western Oil Co., Dover, Del., $5,000,000; minerals; Harry C. Hand.

CAPITAL INCREASES

Crown Abrasive Co., Manhattan, $10,000 to $30,000.

Palmolive Co., Wilmington, Del. (formerly the Eastern Operating Co.), $62,000,000 to $162,000,000. 1,620,000 shares divided into 120,000 shares of par value of $100 each; amounting to $12,000,000 and 1,500,000 shares of common stock no par value. Officers: C. S. Pearse, President; B. A. Massee, Vice President; W. B. Johnson, Secretary; L. C. Proesch, Treasurer.

[Catalogs & Bulletins]

Publications listed herewith are issued by manufacturers and may be obtained free by addressing CHEMICAL MARKETS.

"Grind It In A Pebble Mill" gives descriptions of Patterson Pebble Mills. Twenty-page bulletin, illustrated.

Air Ejectors. Bulletin illustrates and describes in detail Elliott-Ehrhart steam jet air ejectors, their history, theory, and application for low and high vacua with data on steam consumption. "No Moving Parts." 36 pp. Elliott Co., Jeanette, Pa.

Adamant Fire Brick Cement. Four-page booklet describing the increasing refractories service and reducing repair costs in the refinery. Botfield Refractories Co., Swanson and Clymer sts., Philadelphia, Pa.

Air Filter. Four-page illustrated leaflet describing recently developed "Self Clean" air filter for continuous or intermittent operation, also giving dimensions and operating information. Midwest Air Filters, Bradford, Pa.

Alcohol for Industrial Purposes. Gives synopsis of rules and regulations of U. S. Internal Revenue Bureau for various denaturing agents for alcohol used in a wide variety of manufacturing operations. 46 pp. U. S. Industrial Alcohol Co., 110 E. 42nd st., New York.

Aluminum Alloys. Booklet describing the development of aluminum alloys of remarkably high strength, the forms in which they are available and their application, also screw machine products, forgings, etc. 30 pp. Aluminum Co. of America, 2400 Oliver Bldg., Pittsburgh, Pa.

Ammonia Fittings and Supplies. Illustrates and describes refrigerating equipment, ammonia fittings and supplies, extensive data on ammonia, ice making, etc., also detailed dimensions except in cases of larger equipment. Prices, 158 pp. York Mfg. Co., York, Pa.

Anti-Knock Motor Fuels Derived from Cracking Shale Oils. Bound reprint of paper published by J. C. Morrell and Gustav Egloff in the April 7, 1926, issue of National Petroleum News. 4 pp. Universal Oil Products Co., 310 South Michigan ave., Chicago, Ill.

Blowers and Exhausters. Illustrated folder describing multi-stage centrifugal blowers made in wide range of sizes for pressures of 4 oz. to 10 lbs. or vacua up to 12" mercury. "One working part—no wearing parts." 4 pp. Allen & Billmyre Co., 730 Grand Central Palace, New York.

Cameron Pumps. 24-page bulletin illustrates and describes in detail Cameron single stage, double suction volute centrifugal pumps and all of the integral parts. 23 pp. Ingersoll-Rand Co., 11 Broadway, New York.

Chemical Ware Centrifugal Pumps. Illustrates and describes acid-proof chemical ware, pumps, injectors, and ejectors for handling corrosive liquids. 8 pp. General Ceramics Co., 50 Church st., New York.

Crushing, Grinding and Mixing Machinery. Illustrates and describes various crushers, cutters, grinders, pulverizers, mixers, and sifters with some of their applications. 56 pp. Paul O. Abbe, Inc., 71 Murray st., New York.

Electric Thermometers. Illustrated booklet describing thermometer resistance bulbs for all purposes, also giving price list. 9 pp. Wilson-Maeulen Co., 383 Concord ave., New York.

Filters. Illustrated sheet giving information on new "Buenz Filter" for small scale manufacturing and for research and experimental purposes. 1 page. Industrial Separators Co., Woolworth Bldg., New York.

Fire Proofing Paints and Liquids. Eight-page folder describing some interesting tests of "Furo-lin" fire-proof paints. Furolin Paint Mfg. Co., 216 W. Kinzie st., Chicago.

Filters and Driers. A very recent publication illustrating and describing "Feinc" continuous filters and driers. Applications for handling ceramics materials, paint pigments, sugar juice, and numerous other materials. Loose-leaf bulletin made up separately for different industries. 40 pp. Filtration Engineers Inc., 253 Broadway, New York.

Hand Power Elevators and Dumbwaiters. Illustrated booklet describing this equipment for all purposes. 52 pp. Sedgwick Machine Works, 150 West 15th st., New York.

Magnetic Pulley. Illustrated bulletin describing in detail the Acme Magnetic pulley and its application to a large variety of industries for recovering iron and for removing iron which would cause damage to equipment and products. 12 pp. Acme Magnetic Pulley Co., Chicago.

Measuring Hydrogen-Ion Concentration. Illustrates and describes in detail equipment and accessories for measuring hydrogen-ion concentration. Gives considerable data on the subject and two-page bibliography of literature on the subject. 36 pp. Leeds & Northrup Co., 4901 Stenton ave., Philadelphia.

Grinders and Pulverizers. Illustrates and describes various types of roller mills for grinding and crushing various materials with air separation. 20 pp. Raymond Brothers Impact Pulverizer Co., 1315 N. Branch st., Chicago.

Speed Reducers and Gears. Illustrates and describes IXL herringbone, spur, and worm speed reducers, gives considerable mechanical data. 16 pp. Foote Bros., Gear & Machine Co., 215 N. Curtis st., Chicago.

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Application date appears with each patent.

UNITED STATES PATENTS

Issued Dec. 28, 1926

1,611,939. — Finely Divided Sulphur. Harry A. Noyes, Greenwich, Conn., assignor, Texas Gulf Sulphur Co., Bay City, Tex. Jan. 16, 1924.

1,611,941.—Substituted Cyanamides, process. J. L. Osborne, Elizabeth, N. J., & G. Barsky, assignor, American Cyanamid Co., New York. June 29, 1925.

1,611,969.—High Grade Half Stuff, process. H. Wenzyl, Frankfort, Germany, assignor, I. G. Farbenindustrie A. G. July 8, 1926.

1,611,978.—Nitrogen Containing Derivatives of Terpene Alcohols, process. R. Wolfenstein, Berlin-Dahlem. Mar. 29, 1926.

1,611,986.—Fast Greenish-Yellow Shades on Acetyl Silk. J. Baddiley and J. Hill, assigners, British Dyestuffs Corp., Manchester. May 20, 1925.

1,612,032.—Metaldehyde Process. T. Lichtenhahn, Visp, E. Luescher & H. Steiger, Basel, assignors, Elektrizitaetswerk Lonza, Gampel, Switzerland. June 10, 1925.

1,612,098.—Comminuted Wood Product. W. W. Christman, Ridgefield Park, N. J., assignor, one-third, C. C. Hines, Washington. Feb. 21, 1923.

1,612,102.—Wood Preservation. L. C. Drefahl, Lakewood, assignor, Grasselli Chemical Co., Cleveland. Apr. 15, 1925.

1,612,103.—1-4-5-8 Naphthalene Tetracarboxylic Acid, process. W. Eckert, Hoechst, Germany, assignor, Grasselli Dyestuffs Corp., New York, Aug. 31, 1925.

1,612,104.—Preventing Easily Inflammable Articles from Inflaming. A. Eichengruen, Charlottenburg, Germany. Aug. 3, 1923.

1,612,127.—Kiln. B. M. Johnson, Metuchen, N. J., assignor, Carborundum Co., Niagara Falls, N. Y. Sept. 21, 1925.

1,612,167.—Dinitrobenzene Pellet. A. P. Beardsley, Plainfield, & C. E. Mensing, Somerville, assignor, Calco Chemical Co., Bound Brook, N. J. Mar. 9, 1925.

1,612,175.—Crushing Machine. S. Bramley-Moore, White Plains, N. Y., & J. McIntyre, Portobello, Scotland. Feb. 17, 1925.

1,612,180.—Breaking Petroleum Emulsions. M. De Groote, St. Louis, assignor, W. S. Barnickel & Co., Webster Groves, Mo. Apr. 29, 1926.

1,612,218.—Removing Air from Water. E. Piron, New York. July 10, 1922.

1,612,233.—Calcium Arsenate, process. E. A. Taylor, assignor, Grasselli Chemical Co., Cleveland, Apr. 14, 1925.

1,612,265.—Dephlegmator. W. H. Gross, Kansas City, Mo., assignor, Gasoline Products Co., New York. Oct. 31, 1923.

1,612,289.—Distilling Oils. F. Atherton Howard, Elizabeth, N. J., assignor, Standard Development Co. Feb. 14, 1921.

1,612,303.—Dry Agent for Mildewed Seed. E. Melz, Halle, assignor, Chemische Fabrik L. Meyer, Mayence, Germany. Mar. 6, 1925.

1,612,337—Type Cleaning Preparation. E. Thalmann, Winterthur, Switzerland. Oct. 10, 1922.

1,612,351. — Electrolytic Reduction of Sugars to Alcohol. H. J. Creighton, Swarthmore, Pa., assignor, Atlas Powder Co., Wilmington. Mar. 26, 1926.

1,612,411.—Bituminous Composition and Process. W. P. Bentley, Dallas, Tex. May 9, 1924.

1,612,453.—Mining Sulphur. W. T. Lundy and H. Burns, assignors, Freeport Sulphur Co., Freeport, Tex. Aug. 5, 1926.

1,612,506.—Fire Retarding Paint. J. E. Harris, San Francisco, assignor, one third each, W. A. Cassin, & U. S. Abbott, Richmond, Calif. Apr. 5, 1926.

1,612,525.—Cleaning Composition. R. S. Mott, Brooklyn. June 26, 1925.

1,612,557.—Oil and Water Separator. E. C. Weisgerber, Long Beach, Calif. Sept. 26, 1923.

1,612,572.—Fractional Distillation. R. B. Chillas, Jr., assignor, Atlantic Refining Co., Philadelphia. June 30, 1925.

1,612,576.—Sealing and Insulating Composition. H. L. Grant & W. R. Farren, Tamaqua, Pa., assignors, Atlas Powder Co., Wilmington. June 25, 1925.

1,612,629.—Silica Glass Articles. H. George, assignor, Societe Anonyme Quartz & Silice, Paris. July 15, 1924.

1,612,649.—Brick Making. T. C. Pond, Waukegan, Ill., assignor, Johns Mansville, New York. Feb. 25, 1926.

1,612,661.—Introducing Hygroscopic Material Into Evacuated Devices. W. C. Sproesser, Bloomfield, N. J., assignor, Westinghouse Lamp Co. July 16, 1923.

1,612,669.—Cellulose Ester Composition. R. H. Van Schaak, Jr., Evanston, Ill. Aug. 21, 1925.

1,612,670-9.—Fireproof and Waterproof Paints and Varnishes. F. S. Vivas, Los Angeles. June 14, 1923, and May 26, 1926.

1,612,682.—Making Fatty Acids. A. Wolter Krefeld-Rheinhafen, Germany. Oct. 4, 1924.

1,612,686.—Chlorine and Aluminum Chloride. E. R. Welcott, Los Angeles, assignor, Texas Co., New York. Feb. 28, 1921.

1,612,742.—Active Chlorine Preparation. E. B. Putt, New York. Mar. 22, 1926.

1,612,744.—Obtaining Liquids in Solid State. K. Rast, Leverkusen, assignor, I. G. Farbenindustrie A. G., Frankfort. June 15, 1926.

1,612,746.—Gelatin and Glue from Chrome Leather. J. Rinck. Vienna. Sept. 4, 1924.

1,612,777.—Feed Control. I. E. McCabe, Chicago. May 1, 1925.

1,612,780.—Treating Rubber. J. H. Reel, New York, assignor, General Rubber Co. June 20, 1924.

BRITISH PATENTS

Issued Dec. 1, 1926

259,214.—Distilling Liquids and Solids. T. Chumra, Cracow, Poland. Sept. 29, 1926.

259248.—Indicating Liquid Levels. J. Paproth, Berlin. Sept. 29, 1926.

259,280.—Ammonia Synthesis. F. Uhde, Beevinghausen, Germany. Sept. 30, 1926.

259,289.—Protecting Meta's Against Oxidation. Metallisation, Ltd., and W. E. Ballard, Dudley, Worcestershire. July 4, 1925.

259,292.—Coating Compositions. A. C. Holzapfel and M. Holzapfel, London. July 6, 1925.

259,293.—Solvents. C. P. Bynes, Sewickley, Pa. July 6, 1925.

259,314.—Liquid Fuel. Asiatic Petroleum Co., Ltd., and J. Kewley, London. July 10, 1925.

259,329. — Chlorinating Organic Compounds. O. Silberad, Buckhurst, Essex & A. Boake, Roberts & Co., London. July 22, 1925.

259,348.—Hydrochloric Acid. D. Tyrer, Stockton-on-Tees. Aug. 19, 1925.

259,369.—Filtering Liquids. A. C. Riddell, New Cumnock, Ayrshire, Scotland. Sept. 19, 1925.

259,385.—Treating Liquids. United Water Softeners, Ltd., London, & J. F. Jones, Brentford. Middlesex. Oct. 15, 1925.

259,395.—Barium Oxide and Hydrooxide. B. P. Hill & Blaydon Manure and Alkali Co., Blaydon-on-Tyne. Oct. 30, 1925.

259,396.—Detergents. A. H. R. S. Poole, Hove, Sussex. Oct. 30, 1925.

259,407.—Iron Carbonyl.—B. A. S. F., Ludwigshafen. Nov. 16, 1925.

259,409.—Plastic Compositions.— C. E. Lineberger, Chicago. Nov. 16, 1925.

259,417.—Distilling Oils and Fats. Continentale A. G. fuer Chemie, & R. Tern, Berlin. Dec. 1, 1925.

259,418.—Artificial Horn. Internationale Galalith Ges. Hoff & Co., Harburg, Germany. Dec. 1, 1925.

259,431.—Solidifying Liquids. I. G. Farbenindstrie A. G., Leverkusen, Germany. Dec. 29, 1925.

259,437.—Textile Soaps. G. Ullmann, Vienna. Jan. 11, 1925.

259,442.—Purifying Oils. F. Lavirotte, Lyon, France. Aug. 25, 1925.

259,473.—Malt Kilns. P. Reisshauer, Dresden. Mar. 31, 1926.

259,483.—Bronzing. W. Bradley & W. H. T. Rattem Bournemouth, England. Apr. 10, 1926.

259,493.—Cracking Hydrocarbons. G. E. Heyl, Westminster. May 6, 1926.

259,497.—Distilling Liquids. H. Bollmann, Hamburg. May 13, 1926.

259,498.—Magnesium Chloride. I. Farbenindustrie A. G., Frankfurt. May 13, 1926.

259,503.—Cement from Refuse. G. E. Heyl, Westminster. May 31, 1926.

259,507.—Alkylation of Aromatic Hydrocarbons. Naugatuck Chemical Co., Naugatuck, Conn. June 7, 1926.

FRENCH PATENTS

Issued Nov. 25, 1926

616,821.—Purifying Caustic Soda Solutions. L. Cerini. Apr. 20, 1926.

616,894.—New Cellulose Derivatives. L. Lilienfeld. May 29, 1926.

617,019.—Synthetic Ammonia. G. F. Uhde. June 2, 1926.

617,032.—Solid Formaldehyde Products. I. G. Farbenindustrie A. G. June 3, 1926.

617,131.—Controlling Speed of Oxidation. Roessler & Hasslacher Chemical Co. June 5, 1926.

617,218.—Preparing Solid Mixtures of Hypochlorites and Alkaline Chlorides. A. Oppe. June 8, 1926.

617,236.—Magnesium Chromate. I. G. Farbenindustrie A. G. June 9, 1926.

31,398. Addition to 586,110.—Cyanides and Derivatives; Particularly Alkaline Earth Cyanamides. Fabriques de Produits Chimiques de Thann et Mulhouse. June 29, 1925.

617,211.—Insoluble Azo Colors. I. G. Farbenindustrie A. G. June 8, 1926.

617,243.—Chromed Azo Colors. Societe pour l'Industrie Chimique a Bale. June 9, 1926.

31,422 Addition to 576,103.—New Indigoid Colors. Societe pour l'Industrie Chimique a Bale. Jan. 14, 1926.

616,935.—Substituted Aromatic Sulphonic Acids. I. G. Farbenindustrie A. G. May 31, 1926.

617,003.—Vulcanization of Rubber, improvement. E. I. duPont de Nemours & Co. June 2, 1926.

616,812.—Filter. J. J. Naugle. Mar. 25, 1926.

617,042.—Dehydration and Purification of Alcohol, process and apparatus. Societe Anonyme des Distilleries des Deux-Sevres. June 3, 1926.

31,330. Addition to 605,951.—Activated Charcoal. E. Urbain. June 22, 1925.

31,390. Addition to 606, 941.—Activated Charcoal. E. Urbain. June 22, 1925.

31,398. Addition to 595,773.—Separating Liquids of Different Densities, apparatus. J. Schaefer. June 24, 1925.

31,394. Addition to 607,623.—Blacks for Refineries. E. Urbain. June 25, 1925.

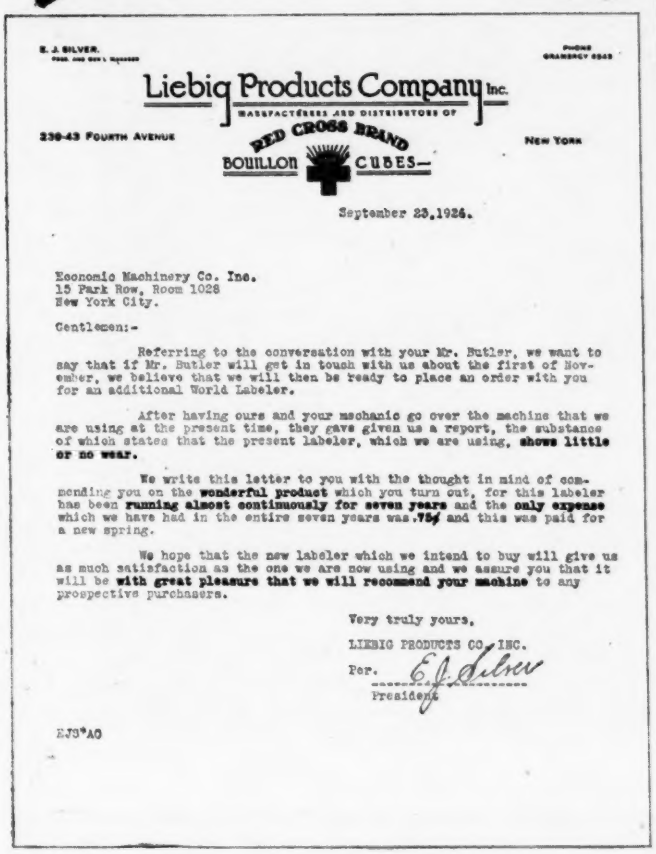
617,049.—Refractory Product. B. Brabee. June 3, 1926.

GERMAN PATENTS

Issued Dec. 9, 1926

435,890.—Dehydration of Slimes. F. Krupp Grusonwerke A. G., Madgeburg, Germany. Mar. 29, 1923.

435,787.—Solid, Stable Water-Soluble Derivatives of Vat Dyes. Dr. M. Bader, C. Sunder, Muhlhouse, France and Durand & Huguenin A. G., Basle, Switzerland. Aug. 22, 1922.



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435,737.—Dry Cooling of Hot Materials. N. V. Carbo Union Industrie Maatschappij, Rotterdam. Dec. 4, 1924.

435,900.—Hydrogen Peroxide and Blanc Fixe from Barium Superoxide. I. E. Weber, H. E. Alcock and B. Laporte, Ltd., Luton, England. Aug. 6, 1925.

435,654.—Solutions of Acids from Alkali Salts. Deutsche Gasluehlicht Auer G. m.b.H., Berlin. Sept. 8, 1923.

435,837.—Drying Salt. Dr. P. H. Mueller, Hannover. Sep. 1, 1923.

435,725.—Drying and Comminuting Glauber Salt, apparatus. G. Polysius Eisengiesserei u. Maschinenfabrik, Dessau. Sept. 27, 1923.

435,668.—Metallic Compounds of Aromatic Biguanides. I. G. Farbenindustrie A. G., Frankfurt. Sept. 11, 1924.

435,799.—Colloidal Phosphoric Acid Fertilizers. Dr. W. de Haen and Dr. F. Steimmig, Hannover. July 17, 1921.

435,611.—Vat Dyes. I. G. Farbenindustrie A. G., Frankfurt. Oct. 28, 1924.

435,612.—Sulphur Dyes. I. G. Farbenindustrie A. G., June 15, 1924.

435,840.—Light Fast Lithopone. I. G. Farbenindustrie A. G. Dec. 1, 1925.

435,804.—Coloring Matter. Composition. Dr. R. Granssen & Dr. G. Goerz, Berlin. Mar. 15, 1924.

435,686.—Sealing Wax.—R. Lack, Freiburg, Baden. Sept. 6, 1925.

435,692.—Improving Odor of Phenols and Hydrocarbons for disinfecting purposes. Z. M. Stinnes, Essen. Oct. 23, 1924.

435,693.—Dust Binding Sweeping Compound. H. Zieger, Dresden. Mar. 18, 1924.

435,713.—Disinfectant. I. G. Farbenindustrie A. G., Frankfurt. Mar. 4, 1923.

435,714.—Stabilizing Hydrocyanic Acid for germicidal purposes. Chemische Fabrik Dr. H. Stoltzenberg, Hamburg. July 3, 1925.

FEDERAL TRADE COMMISSION

(Continued from page 48)

they were engaged and especially to indicate the characteristics of their statistical activities. These schedules are being used now as the basis for field work on open price associations.

Work on other types of trade associations is limited to what the Commission deems is necessary in order to elucidate the problems indicated in the Senate resolution. The work to be done in the field is extensive but on account of shortage of funds it was necessary for the Commission to proceed slowly. An important feature of this particular inquiry is the study of the statistical work of open price associations, including statistics of prices, production, stocks, etc. This involves the analysis of the effects of open price activities upon prices by statistical methods, including comparisons with other types of trade associations.

JAPAN AND CARNAUBA WAXES HIGH

(Continued from page 41)

An actual shortage of stocks at the primary markets is a definitely established fact. The reason for the shortage is laid to labor troubles in Brazil, brought about by the migration of labor to other fields such as coffee and cocoa, which are more remunerative, resulting in the neglect of the plucking of leaves. Also, Europe has been more foresighted in their contract purchases than has this country and large portions of the production have been shipped to European channels. In any event an actual shortage is existent and the most optimistic of those seeking replacements do not look for relief until late in the Spring. In the meanwhile, on spot, it has become a question of where to get stocks of No. 1 yellow and No. 2 regular wax rather than what price it will be necessary to pay. At the moment sales have been made at 90c per pound for yellow in broken lots and from 68c to 70c per pound for No. 2 regular. An inspection of the import manifests reveals a fairly large importation, but this has no effect on the market as it is practically all accounted for months in advance on a contract basis.

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Capacity	Diam.	Height	Weight	Price BLACK
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10 gals.	14½"	26"	27 lbs.	2.25
20 gals.	20 "	26"	42 lbs.	4.50
30 gals.	21 "	34"	65 lbs.	6.00
55 gals.	25 "	35"	80 lbs.	7.00

Prices of Galvanized and Tinned Nesting Cans on Request

John Trageser Steam Copper Works

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FLOTATION OF ORES

(Continued from page 46)

the metallic sulfides desired, the others being depressed with the gangue. The relative flotability under a standard set of conditions has been determined for most sulfide minerals, also for some of the more common gangue constituents such as silica, siliceous materials free from mineral, calcite, limestone and others. Chemicals seem to have a positive action on minerals—really a different action on each, and it is this fact that is taken advantage of in differential flotation work. Different oils have a slightly different action on the flotation of different minerals and thus assist the chemicals. The terms "sinking" or "dropping" of minerals are now common in flotation plants ,which mean that chemicals and oils are added to the flotation pulps to depress the undesirable flotable minerals and raise the desirable ones. For instance, galena can be floated away from sphalerite and pyrite under proper conditioning of the pulp and addition of suitable flotation reagents. In turn, certain chemicals and oils can be added which remove the depressing action of the first reagents and render the sphalerite amenable to flotation, thereby leaving the pyrite behind. Again, other reagents can be added to float the pyrite from the gangue maaterial.

The various chemicals used in flotation may be classified under four headings, these representing the function that these chemicals perform in the differential flotation cycle. The general headings are: Regulators, promotors, depressors, and frothers. The regulator regulates the hydrogen ion concentration, that is, the acidity or alkalinity of the mixture, and for this purpose soda ash and lime are largely used. Promotors are reagents which aid in causing minerals to float, such as potassium xanthate and thiocarbanilid, which float all sulfides, and copper sulfate, which is a specific promotor for sphalerite, and floats only that mineral in the presence of others. A depressor keeps undesirable minerals from coming to the surface, examples being sodium cyanide, which almost completely inhibits the flotation of pyrites, and cyanide and zinc sulfate, which together depress zinc minerals.

A FROTHER is any substance that will produce the mineral bearing froth. For this purpose steam-distilled pine oil is largely used, with cresylic acid and ortho-toluidine of lesser importance. In any selective flotation operation all of these four components are necessary, with the possible exception of a depressor.

Selective flotation has been almost exclusively employed in the case of sulfide ores. In handling oxide ores, a sulfidizer, such as sodium sulfide, is used to surround the oxide particles with a sulfide and thereby give to the oxide ore the floating properties of a sulfide ore. Oxidized ores, particularly of the lead-silver type, are now being treated successfully and profitably by flotation at several mills in the United States and Mexico. Copper ores of the oxidized and semi-oxidized variety are also amenable to this treatment, and are actually being milled on a large scale. A paper on this subject, which will detail the practice at operating plants both in the United States and Mexico, is now being prepared by the Bureau of Mines. The paper will contain contributions from experts operating such plants.

The reagents consumed in flotation work during 1925 with their classifications are given in the following table:

(Continued on page 108)

WM. S. GRAY & CO.

342 Madison Avenue
New York

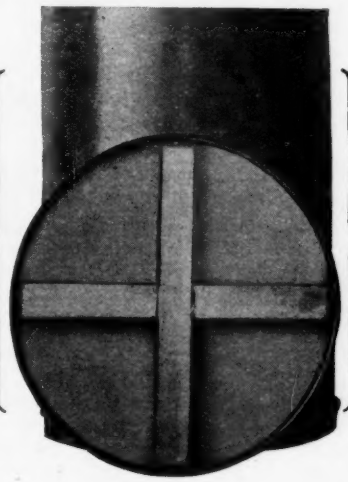
Vanderbilt 0500 Cables: Graylime

Acetate of Lime	Acetone
Denatured Alcohol	Methanol
Magnesium Carbonate	Formaldehyde
Magnesium Oxide	Phenol
Whiting	Chlor Phenols
Benzol	Sulphuryl Chloride

SAVE SHIPPING CHARGES

ANY dry material—solid, crystals, powder—can be shipped, up to 150 pounds weight, safely and more cheaply in Champion Fibre Shipping Drums. Their extreme lightness saves you freight and extends your sales area where freight must be equalized. Their great strength—steel tops and bottoms, straight wound, 8-10 ply, waterproof fibre sides—make them valuable for re-use. They cost less than any other suitable shipping package for from 50 to 150 pound quantities. Ask us to show you how to save money by using Champions.

CHAMPION CONTAINER CO., INC.
25 MORRIS ST. PHILADELPHIA



Alfred W. Jenkins Schuyler L. Parsons
William A. Stopford

PARSONS & PETIT

Established 1857

63 Beaver Street, New York City

Selling Agents

The Freeport Sulphur Company

The Sulphur Export Corporation in Mexico

The Salzbergwerk Neu-Stassfurt in United States
for Carbonate of Potash

Emil Fog & Figli of Messina, Sicily
for Essential Oils

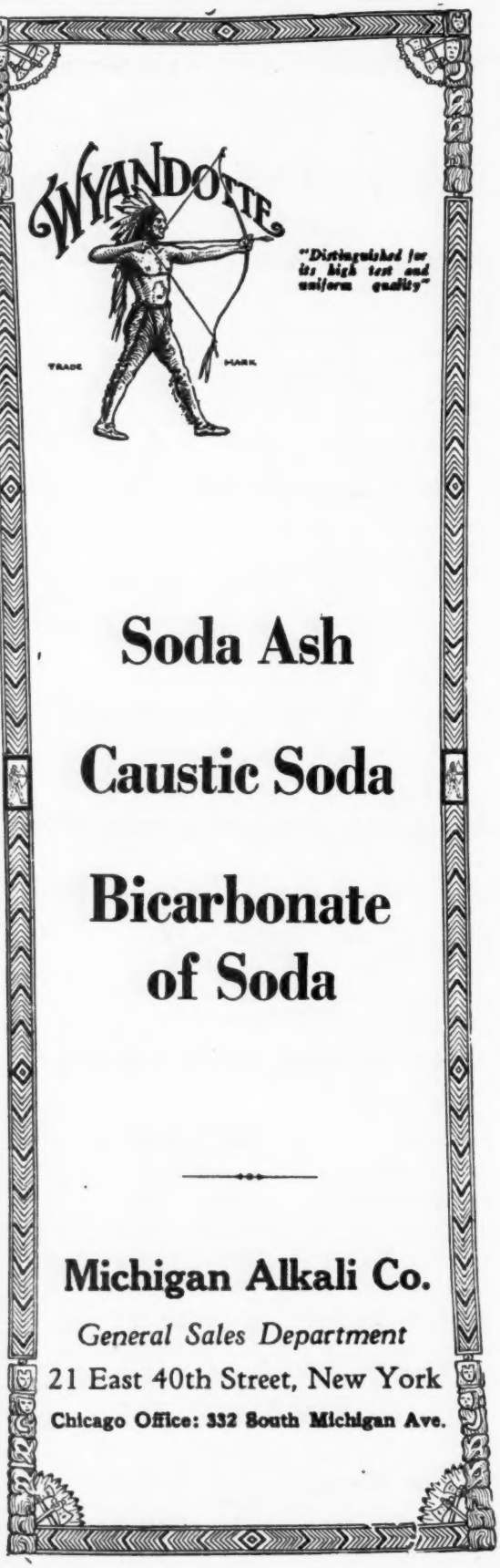
Distributors for

The Diamond Alkali Company

Acids	Blue Vitriol
Arsenic	Caustic Soda
Pig Lead	Sulphur Oils
Soda Ash	Caustic Potash
Castor Oil	Nitrate of Soda
Glycerine	Phosphate Rock
Saltpeter	Carbonate of Potash
Empty Drums	Sodium Bicarbonate
Olive Oils	Sulphate of Ammonia

Crude and Refined Sulphur

Powder Manufacturers' Supplies and Fertilizer Materials of All Kinds



POLITE BUSINESS BLACKMAIL

(Continued from page 44)

play no favorites. When you buy from us you buy with the assurance that you will receive every ounce of leeway, service and concession that our other customers enjoy."

I suppose every manufacturer knows how easy it is to give in to a big customer whose business you know you are going to want in the future, but we had made up our mind to stick to our guns for the sake of our policy and for the 95 per cent who played fair with us. We have never had a product which lent itself to broad, general, periodical advertising. But we believed in the general principles of advertising so thoroughly that several years ago we started the publication of a little house-magazine called "The Bulls-Eye," which we mail direct to our list of customers and prospects in a wide variety of industries. During this argument with the wriggling minority, this house-magazine showed its value to us as a fine medium of expression. We were able to tell the 95 per cent how we were going to handle the 5 per cent who wouldn't keep faith. In September for example, we said to our whole list of customers in "The Bulls-Eye":

"Anyone who places a contract with us can depend on us to live up to our end of the agreement in full, both in letter and in spirit. Those who do not intend to carry out their end of the bargain in the same sincere manner should never make contracts of any kind in the first place. The threat of taking their business elsewhere will not cause us to disregard our responsibility to our other customers.

"We like to get business just as anyone else does, but we do not wish to get it at the expense of a reputation we have spent so many generations in establishing. No game of give-and-take can be played with all the give on one side and all the take on the other."

Most of our customers appreciated this viewpoint, but it was amusing to see what weak excuses and arguments the welchers tried to use. Some of these excuses I have enumerated already. It was queer how business had fallen off in some cases, how departments had been given up. How many ingenious excuses this small bunch could give for attempting to cancel shipments of a product they had purchased at a higher price! While such conditions are not pleasant, there is nevertheless room for give-and-take conversation when a man is merely bringing up objections to doing something he will have to do in the end anyway, but when all excuses fail there are always one or two who try the big stick. Then mere argument of necessity ceases. Then, in our opinion, is the time to stand up and fight. This is how it came about in the case I will cite here.

On December 16, 1925, one of our customers contracted for twenty barrels of liquid white shellac at $2.25 a gallon. After six barrels of this order had been delivered, the price of shellac fell below the price stated in the contract. We were asked to cancel delivery of the remaining fourteen barrels. We refused and the correspondence took the usual argumentative course. Then, when all excuses failed, came the threat. It seemed to us like attempted business blackmail, for not only did this customer tell us that we would lose thousands of dollars of his future business, but he also threatened that we would not get any business from other manufacturers in his city, a place where we had many valuable customers.

Here is the letter he wrote us after the argument stage had passed. Note the polite way in which the big stick is waved over our heads:

PENTASOL
PURE AMYL ALCOHOL
SHARPLES TRADE MARK SOLVENTS
PENTASOL
Amyl Alcohol uniformly pure. A synthetic product made from raw materials unlimited in supply, by a process under accurate chemical control. Purchaseable under contract at fixed price.
THE SHARPLES SOLVENTS CORPORATION
SHARPLES BLDG., 23rd & WESTMORELAND STS.
PHILADELPHIA

MECCO

SOLVENTS	SOLUBLE COTTON	SOLUTIONS
ACETATES { Ethyl, Butyl, Amyl	GRADES { Dope, Lacquer, Bronzing, Nitro	Base Solutions For Leather Dopes, Bronzing Liquids, Lacquers, Special Formulas for all purposes
METHYL ACETONE	All Viscosities	
METHANOL	Bleached or Unbleached	

All Products made by The MINER-EDGAR CO., Carefully selected, mixed and blended in accordance with Standard Formulas or to meet your Specifications.

DENATURED ALCOHOL

THE MINER-EDGAR COMPANY
110 William St., New York

LIQUID CHLORINE

Single Unit Tank Cars — *Multi-Unit Tank Cars (1-ton Containers)*

150-lb. Cylinders

Standard Bleaching Powder

Natrona Porous Alum

Commercial Alum

PENNSYLVANIA SALT MANUFACTURING COMPANY

Executive Offices:

Widener Building, Philadelphia, Pa.

Representatives:

New York — Chicago

Pittsburgh — St. Louis

Works:

Philadelphia and Natrona, Pa.

Wyandotte and Menominee, Mich.

Chlorine Distributing Station, Babbitt, N. J.

Gentlemen:

The writer has for acknowledgment your letter of August 20, which is in answer to his of the 17th, regarding the remaining unshipped portion of our order placed with your representative on December 16, 1925.

What you say in your letter is very true, but the writer cannot quite understand that a corporation as large as yourselves would insist upon its customers taking a loss on a few barrels of shellac, when it will mean to you thousands of dollars in future business.

We are in the manufacturing business, as yourselves, but are often compelled to do things to please our customers and retain their good-will.

When the writer wrote you previously, it was with all good intentions and for the benefit of William Zinsser & Company, in so far as ourselves and other (name of town) manufacturers are concerned.

I am not trying to fight the other fellow's battle, but I know exactly the sentiment and feeling now existing and if you are going to insist upon the remainder of our order being shipped at the price quoted we will be obliged to take it, and take the loss and say nothing. But we cannot favor your house with any future business.

I am sure if you think this over very carefully you will see the writer's viewpoint and write him that an adjustment will be made so that we may order in the balance immediately.

It is somewhat ironical that while he was writing us and arguing against taking the balance of his unexpired contract, the market advanced so that it became a good buy. As soon as this letter was forwarded from our Chicago office we decided it was right and proper to take a firm stand. There comes a time, as I have said, when it doesn't pay to keep a customer's good-will at the high expense of breaking faith with the great majority of one's customers and changing a long-time business. We answered this threatening letter, the kind every business receives once in a while, as follows:

Gentlemen:

Your letter of August 25, written to our Chicago office, has been forwarded to us for reply. This letter refers to the remaining unshipped portion of your order placed with us on December 16, 1925, calling for twenty barrels of 4-pound pure white shellac at $2.25, against which you have drawn but six, leaving a balance of fourteen.

In other words, you very clearly point out that if Wm. Zinsser & Company cancel that contract and make what amounts to a present of about $25 a barrel, or a total of $400 (the difference between today's market and your contract price), we may then have a fair chance of getting some of your future good-will and trade.

You go on to say that you know exactly the sentiment and feeling now existing in (name of town), and unless we stoop to this entirely unfair and unethical demand, we will also run the chance of never again receiving any business from the rest of the furniture factories in (name of town). You again advise us to "think this over very carefully," and that we will see your viewpoint and will make an adjustment.

This letter is to advise that William Zinsser & Company, just because it is "a corporation as large as ourselves," does not have to pay cash for any business that it receives, and we look at the entire matter only from the point of fairness and good business ethics. If by doing what is right we run the chance of losing business in the future, then we have to depend on being able to find enough people who believe in doing business our way to enable us to continue in the future as we have in the past seventy-seven years.

For the reasons pointed out to you in great detail

Church & Dwight, Inc.

Established 1846

80 MAIDEN LANE NEW YORK

Bicarbonate of Soda

Sal Soda

Monohydrate of Soda

Standard Quality

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is the perogative of every buyer and should be exercised especially in the purchase of pure chemicals for medicinal and scientific uses.

Mallinckrodt CHEMICALS

appeal to critical users wherever purity and reliability are required. They represent *distinctive excellence*, the natural development of over fifty years of manufacturing experience.

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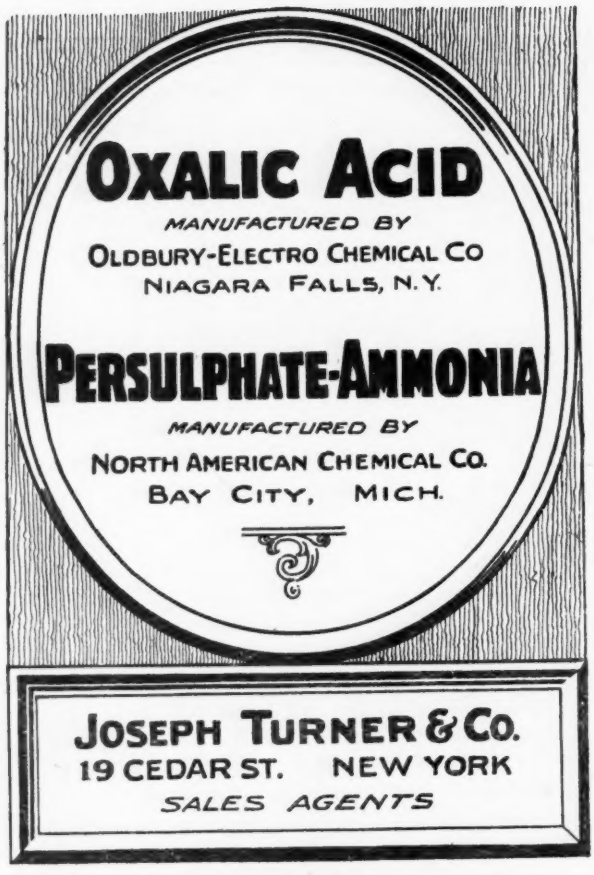

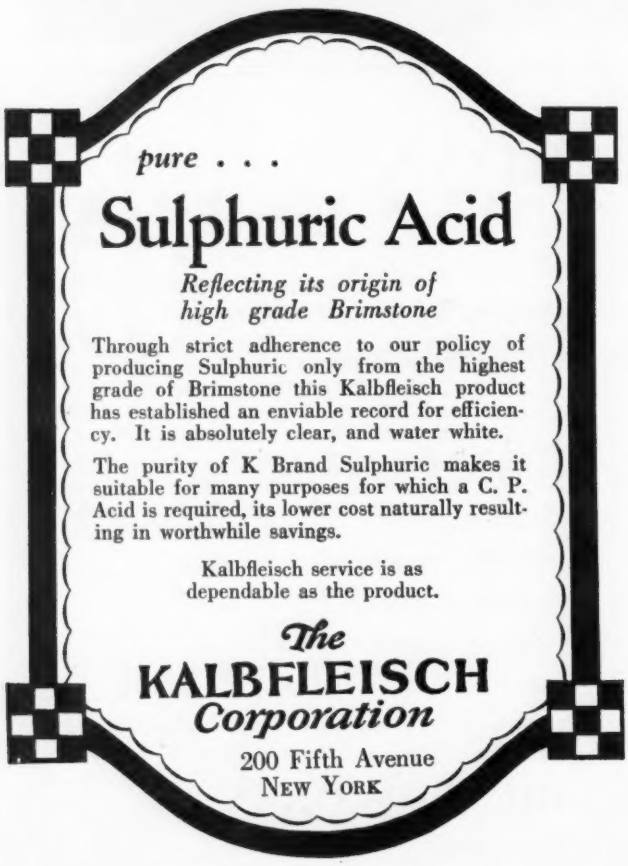
pure . . .
Sulphuric Acid
Reflecting its origin of high grade Brimstone
Through strict adherence to our policy of producing Sulphuric only from the highest grade of Brimstone this Kalbfleisch product has established an enviable record for efficiency. It is absolutely clear, and water white.
The purity of K Brand Sulphuric makes it suitable for many purposes for which a C. P. Acid is required, its lower cost naturally resulting in worthwhile savings.
Kalbfleisch service is as dependable as the product.
The KALBFLEISCH Corporation
200 Fifth Avenue
NEW YORK

in the letter of August 20 sent you from our Chicago office, and because it would be eminently unfair to release you from a few barrels on a high-priced contract when hundreds of our other customers, and competitors' customers, have taken theirs without a murmur, we will ask you to give us shipping instructions on the undelivered portion of your signed contract.

Then we ran his letter and our reply in our house-magazine and also this statement of policy with the actual evidence in the form of letters shown above:

"We do not know offhand how many tons of Vac Dry and how many gallons of Bulls-Eye Liquid Shellac we have sold on the decline; but the probabilities are that we have agreed to deliver a very minimum of $1,000,000 worth of low-priced shellac. Despite the fact that our raw material is about seventeen cents higher today than the low point, every ounce of this low-priced shellac that we have contracted for will be delivered without any squirming or fussing on our part. In other words, the shoe is on the other foot. But in as much as we protected ourselves as rapidly as we accepted contracts, we cannot see that we have any complaint to make.

"When we accept an order for shellac, we immediately buy sufficient shellac to cover the order at the price at which we accepted it. All of which goes to explain why we are so insistent that contracts be lived up to. It does not make any difference to us whether the price of shellac goes up or whether it goes down. When a man contracts with us for any quantity of shellac for future delivery, we immediately buy sufficient shellac to cover that order, and we know of no reason why any one customer should be accorded any different treatment than that given the balance of our trade, regardless of his size.

"Occasionally we run across a customer too narrow-visioned to comprehend a policy of this kind, but even if it costs us his business and perhaps the business of his community (which, frankly, we do not think it will, because a whole community of business men is not narrow-visioned) there are a few things that we shall insist upon so long as we are connected with this business: i. e., that contracts be lived up to, and that all customers be treated alike.

"We have had discussions with one or two other concerns on this subject, and while no one has ever accused us of manufacturing these cases out of whole cloth, it may be that here and there some buyers of shellac are skeptical of our willingness to turn down the possibilities of future business for the sake of maintaining what seems to us to be a clean, legitimate business policy. For that reason we are reproducing the essential parts of the letter that crossed our desk a short time ago, from the gentleman who wanted to cancel his contract, together with the essential parts of our reply to him. And while we would consider it a violation of confidence to divulge the name and address of the person with whom we have had this controversy, we would nevertheless be only too happy to provide any skeptics with unequivocal evidence of our claims to fair dealings."

The customer who used polite blackmail is naturally not so pleased that we handled him in this manner and made his case a demonstration that we meant exactly what we said when we talked about the sanctity of contracts and the necessity of doing business on a basis of living up to the letter of commitments.

But he is taking the undelivered portion of his signed contract and our whole list of customers knows our attitude. The great majority of them, the fair 95 per

Antimony Salt

Powder form 66%
(TARTAR EMETIC SUBSTITUTE)
Our own manufacture

C J W Co

JOHN C. WIARDA & CO.
Incorporated
HOWARD B. BISHOP, President
Manufacturing Chemists
262 Freeman Street,
Brooklyn, N. Y.
Cable Address—Fluorine, Brooklyn
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INCORPORATED
78 Front Street *New York City*

Exclusive Distributors

NITRATES
Ammonium - Calcium - Sodium
SODIUM NITRITE

Manufactured by
Norsk Hydro Elektrisk Kvaelstofaktieselskab
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FORMIC ACID
90%

Manufactured by
Fabriek van Chemische Producten
Schiedam, Holland

"UNIFORM QUALITY"
Emery
"ESTAB. 1840"

STEARIC ACID

DISTILLED
Standard Brand, Double Pressed,
Luxe Brand, Triple Pressed

SAPONIFIED
Buff Brand, Double Pressed
Lily Brand, Triple Pressed

OLEIC ACID

ELAINE BRAND
for

Wool Soap	Lubricating Oils	Textile Soaps
Wool Lubricating	Screw Cutting Compounds	Dry Cleaning Soaps
Silk Dyeing & Finishing	Metal Polish	Flotation Oil

Stocks Carried in All principal Cities

The EMERY CANDLE Co.

St. Bernard - Cincinnati, Ohio
New York Office
233 Broadway - New York City **Phone - Whitehall 4573**

cent, are good business men themselves and seem to appreciate our stand. Here is a letter which just came in from one of them showing how many of them feel:

Gentlemen:

We have just laid down your October issue of the "Bull's-Eye" after having read with interest the article entitled "Polite Blackmail."

This letter of yours is apropos, coming as it does immediately after the writer had attended a session of our local Rotary Club at which time we were addressed by one of our members on the all-important subject of "Business Methods."

We were one of the "unfortunates" who made a contract with you for Bull's-Eye Shellac futures only to find ourselves in the unfortunate position of being long on a declining market, but you were good enough to inform us of the fall in prices and we immediately covered at a low price, making a new contract with you, so that when we end the year we will at least have profited by averaging.

We believe at the present time that we have used up our allotment of the higher-price shellac and that we will soon be giving you instructions for shipment against the lower price.

We believe strictly that it is unethical to repudiate a contract for good-will and would hate mightily to have the tables turned, although we frequently do find a few, but fortunately very few, customers who strive for these unfair advantages.

Another letter, this time not from a customer, shows that a firm stand wins approval among real business men.

The article in the current copy of your house-organ compels me to thank you for the inclusion of ourselves on your mailing list. The article is indeed wholesome to read and demands that I congratulate your company upon the maintenance of so truly businesslike a policy. It is indeed unfortunate that so many in the business world maintain such flabby excuses for business policies as to make it difficult for those of us who believe in real business principles to maintain them. I write this with no ulterior motives whatever but simply to express to you that encouragement which when extended is usually welcomed.

So there is the story of a battle with one customer for the benefit of all customers and incidentally for our competitors as well. I believe it may offer a suggestion to other manufacturers who occasionally bump up against the same problem. The letters we have received from many sources indicate that when a business house wages a battle for honest-to-goodness business principles ond lets its customers know about the battle, it helps all along the line.

It isn't a pleasant task—a matter like that, but it is sometimes necessary. The process might be called, with apologies to William Shakespeare, "The Taming of the Shrewd," and it is my opinion that it will usually meet with the full approval of the big 95 per cent of good sports who would rather be fair than slippery in all their business dealings.

FILTRATION OF WATER

(Continued from page 47)

mentation basin, it is equally important in its function of allowing time for complete chemical reaction to take place between the coagulant and the colloidal matter, the color, and some forms of organic matter in solution generally referred to as vegetable matter. A hardening or solidification of the loosely gathered coagulated matter also takes place in the period of time afforded to

Ethyl Acetyl Glycolate—98%
Butyl Butyrate—98-100%
Butyraldehyde—97½%
Butyl Tartrate—99%
Zinc Butyrate
Paraldehyde Plastols
Tech. Distilled
Iso-Butyl Alcohol
Methanol

1150 Broadway, New York

KUTTROFF, PICKHARDT & CO.
Incorporated

DIPHENYL-GUANIDINE

The effect on colors of an accelerator should be taken into consideration in the manufacture of non-blooming inner tubes, drug sundries, etc. Dovan Diphenyl Guanidine can be used in conjunction with practically all the organic and inorganic colors without dulling or changing the tone in any way.

Dovan Chemical Corporation
30 Church Street - New York City

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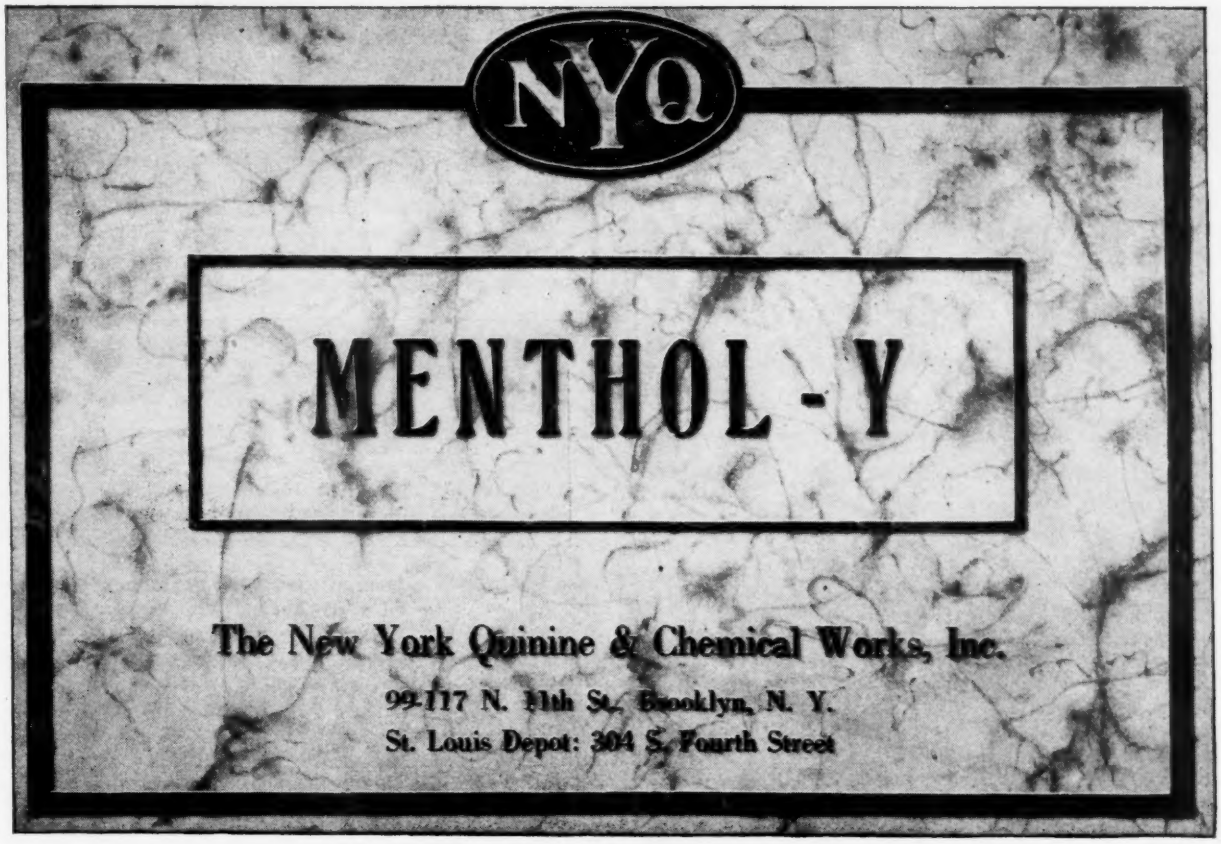
J. A. Kendall, Akron, Ohio and Chicago, Ill.; J. E. Odell, Boston, Mass.; American Oil & Supply Co., Trenton, N. J.; C. A. McLarty, Toronto and Montreal; Martin, Hoyt & Milne, San Francisco and Los Angeles; Buckleton & Co., Ltd., 20 Chapel St., Liverpool, England.

Ample stocks are always carried at these points.



Cream of Tartar

99½—100% Pure

U. S. P.

Tartaric Acid

U. S. P.

POWDERED CRYSTALS

GRANULATED

TARTAR CHEMICAL WORKS

Royal Baking Powder Co.

100 East 42nd Street

New York

Largest Manufacturers in the United States

Th. Goldschmidt Corp.

68 Beaver Street, NEW YORK, N. Y.

608 South Dearborn Street, CHICAGO, ILL.

Sole Representatives for:

Barium Chloride
Blanc Fixe
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Para-Nitroanaline
Highest Standard Specification
Manufactured by
CROWN CHEMICAL CORPN.
Keyport, N. J.

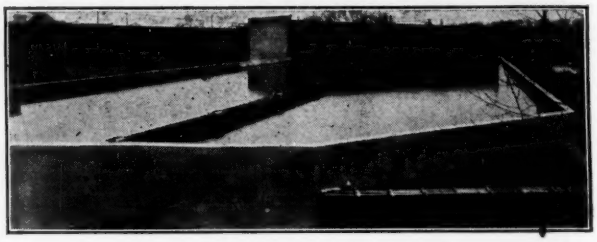
Direct all inquiries to
MONMOUTH CHEMICAL CORPORATION
128 Front Street
New York City

Perchlorate of Potash
Chlorate of Potash
Barium Nitrate
Strontium Nitrate
Ammonium Chloride

White 99-100 per cent
White 98-100 per cent
Grey — large, small and fine crystals

MONMOUTH CHEMICAL CORPORATION
Main Office
128 Front Street New York City

the water in its passage through the basin and while much of the coagulated matter falls to the bottom of the sedimentation basin a considerable quantity, nevertheless, goes to the filters and it is essential that this matter be in such a condition, that it will not break up and slip through the comparatively large interstitial channels between the sand grains. At this point it may be a matter of interest to state that these channels approximate 1/1200th of an inch in diameter and, although they form devious passages through the sand bed, this area is fairly uniform throughout. The particles of matter retained in the filter bed are infinitely smaller, even after coagulation than these channels and



National Silk Dyeing Co. water purification plant at Dundee Lake, N. J.

the process of filtration becomes really a problem of attraction and adhesion rather than of straining, except for the larger particles. That it is efficient, is shown by the bacterial removal obtained, which is generally above 99 per cent and frequently 100 per cent.

Earlier in this article the claim is made that certain dissolved substances are removed in the filtration process. Excepting in the case of water softening by means of base exchange silicates, this statement needs explanation to the extent of stating that colloids and matters in solution are, in the filtration process, reduced to a solid form so that they may be held by the filter. The addition of a coagulant alone or at least of alum, the almost universally used coagulant, does not necessarily produce complete coagulation due to an unsuitable concentration of the hydrogen ion or, as it is now termed, the p H concentration. We can, however, precipitate the colloids that do not respond to the action of the alum by the addition of sulfuric acid in such quantities so as to bring the p H concentration down to the proper range at which complete coagulation takes place, and matters which were in colloid form or even in solution, readily precipitate and may be completely removed by subsequent filtration.

Color, which includes colors derived from decaying vegetation, roots, etc., as well as nearly all of the aniline dyes, direct colors, vat colors, etc., readily respond to the coagulation process. This is especially important in the purification of industrial supplies, which are often heavily contaminated with artificial dyes and which could not be utilized were it not for the remarkable efficiency of filtration.

Chlorine is now an important adjunct to filtration It is used as a safeguard in the post-treatment of potable supplies to destroy any bacteria that may be present in the water for any reason. In industrial water purification it is sometimes used before filtration to prevent fermentation in sedimentation reservoirs; sometimes directly in the filters to prevent excessive growths within the filter beds; and more generally after filtration to prevent growth of bacteria and similar organisms on the inside of distribution systems. This is especially advantageous where waters containing very high organic content are treated because these waters even after filtration are in a condition which promotes the growth of bacteria. Chlorine not only sterilizes, but

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ISOPROPYL ACETATE
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AMYL ACETATE
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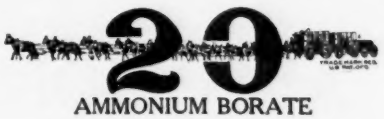
AMYL PROPIONATE
ETHYL LACTATE
SPECIAL SOLVENTS
BUTYL ALCOHOL
AMYL ALCOHOL
REFINED FUSEL OIL
DIETHYL PHTHALATE
DIAMYL PHTHALATE
DIBUTYL PHTHALATE
DIBUTYL TARTRATE
TRIACETINE

KESSLER CHEMICAL COMPANY
ORANGE, N. J.

THE PURITY OF 20-MULE TEAM BORAX PRODUCTS IS NEVER QUESTIONED



AMMONIUM BORATE

BORATE OF MANGANESE

BORAX GLASS
20-MULE TEAM BRAND
Refined and U. S. P.

BORAX
Crystals, Granulated, Powdered, Impalpable, Calcined

BORIC ACID
Crystals, Granulated, Powdered, Impalpable, Anhydrous

Samples Gratis

SULPHUR
Pure Refined Sulphur in all grades

PACIFIC COAST BORAX CO.
110 William Street, NEW YORK
(Dept. M)
Chicago Los Angeles

Special Cresol Compound

for Hospital Use

Light in color *Clear Solutions*

Two to three times the germ-killing power of Liquid Cresolis Compositions, U. S. P.

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Holbrook, Mass. and St. Louis, Mo.

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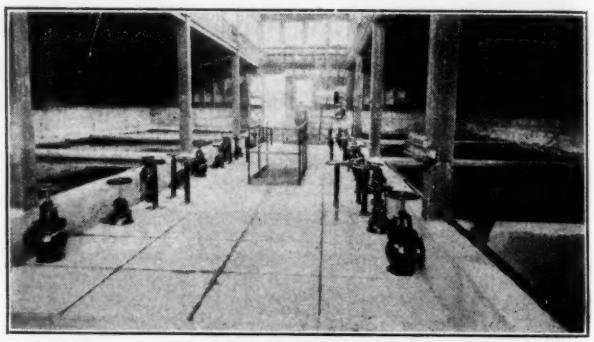
also oxidizes and reduces the matter which forms the food for the lower organisms.

Chlorine is directly applied in the form of the gas or a solution of a hypochlorite is employed. On account of the ease of operation, cleanliness and accuracy, the treatment by chlorine gas is regarded as the more preferable and is almost universally employed. As a post-treatment in the filtration process, water softening by means of zeolites or base exchange silicates now stands abreast with chlorination. The lime-soda softener has now in all but special cases been superseded by the zeolite water softener, which is nothing more than the standard type of water filter filled with the sand-like zeolite.

By employing the indicated aids to the filtration process the manufacturer of today is often able to convert a highly polluted stream which flows by his plant into a water which is equal for his purposes to rain water and probably much superior to the municipal supply which he uses in his residence. The sewage-contaminated, dye-polluted water containing waste of almost every imaginable kind is passed through his filter plant and finally delivered entirely free from color and turbidity, with no odor, no organic matter and with no hardness. Substances that cannot be removed by any process short of distillation are neutralized or rendered innocuous.



Interior of Waldrich Bleachery

This treatment is neither expensive nor complicated A plant having a capacity of ten million gallons a day can be run by one operative under such average conditions of pollution as are found in the thickly populated manufacturing districts. Assuming a hardness of five degrees, the average cost of treatment approximates $22.50 per million gallons, divided as follows:

Coagulation	$ 6.00
Attendance (including wash water, etc.)	1.00
Chlorination	1.00
Softening	11.00
Pumping	1.00
Interest on investment and deterioration	2.50

This makes a total cost of $22.50 per million gallons. Comparing this with $60.00 per million gallons, a fair average price that municipalities would charge for their water which may not have been filtered and surely has not been softened, it is quite apparent that a modern filter plant is, in addition to its many benefits, a most decided economizer.

While $22.50 per million gallons represents the cost for treatment in extreme contamination of the water supply, it may be considered a fair average cost, because it is a large plant. Small plants, naturally, are more expensive to run, but their average cost will not be far from the above figure.

Large filter plants are almost always constructed of concrete and are of the gravity type. This gives an

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economical first cost and great durability as well as the highest efficiency. The present tendency is to make a strictly utilitarian plant more attractive in appearance. While this is a somewhat difficult matter, the selection of the site and a little attention to exterior details have done much, but there is still great room for improvement along these lines. It is not necessary for a filter plant to be hideous.

Filter plants having a capacity of less than half a million gallons per day are usually of the pressure type, in which the filter bed is contained within a steel shell and the water is forced through the filter and delivered to the point of consumption with losses of head ranging from two pounds to fifteen pounds, depending upon the completeness of the treatment and the speed of filtration. The small plant, however, can be just as complete in its details as the large one and the results obtained by all types and sizes are comparable.

It is fortunate indeed that the ingenuity of man has been able to develop the filter to its present-day capabilities. So urgent has become the need of municipalities for water, that in the heavily populated manufacturing districts they have appropriated all but the most polluted supplies. The manufacturer must either move his plant at a prohibitive cost or else use the highly polluted supply available. When he is through with the water, it flows down-stream to the next manufacturer and to the next and the next, so that the same water is used over and over again. Nevertheless, the art of filtration has progressed to such a stage, that this is being done with safety in numerous instances, and it is often found that from an industrial standpoint the purified water is better than that same water was above any point of contamination.

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Tridecylic Acid MP 39.5-40.5°
Myristic Acid MP 52-53°
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FLOTATION OF ORES
(Continued from page 92)

Product	Class	Pounds
Pine oil	Frother	4,279,229
Potassium xanthate	Promotor	4,029,846
Lime	Regulator	2,166,819
Refined coal-tar oils	Collector	4,517,591
Reconstructed oils	Promotor-sulfidizer	9,649,880
Crude oils		420,837
Hardwood creosotes		4,805,555
Sulfuric acid		40,028,170
Thiocarbanilid 20% and ortho-toluidine 80%	Promotor and Frother	410,843
Cresylic acid	Frother	210,235
Sodium and barium sulfides and calcium polysulfide	Sulfidizer	5,532,089
Sodium silicate	Defluculator	291,047
Tarol		8,400
Soda ash	Regulator	1,566,482
Aldol	Frother	9,203
Copper sulfate	Promotor	1,543,686
Sodium sulfite	Depressor	57,685
X-Y mixture (containing xylidines)		20,055
Zinc sulfate		1,045,342
Cyanide	Depressor	265,966
Miscellaneous		763,007
		81,666,957

FLOTATION work was previously carried on in an acid medium, but the year 1925 saw the change from an acid to an alkaline medium. This change occurred for several reasons. One of the reasons is that lime, which furnishes a satisfactory alkaline medium, is cheaper than sulfuric acid. Also an alkaline medium does not cause as much corrosion as an acid medium. Lime is more readily procurable than acid, and nearly all big operators have their own lime plants. Although in 1925 over 40,000,000 pounds of sulfuric acid were used, authorities state that this is only one-tenth of the amount used in former years.

The quantities of different classes of ore treated by flotation during 1925 are given in the following table:

	Total treated Tons	Treated by flotation Tons	Concentrate (flotation) Tons	Concentrate by other methods Tons
Gold-silver ores	484,924	484,924	36,445	.....
Copper ores	46,175,198	40,576,067	2,166,557	1,597,022
Silver-lead ores	1,295,228	636,628	70,813	97,875
Lead ores	6,120,716	1,793,547	175,713	224,358
Lead-zinc-iron ores	2,203,313	1,432,264	134,257Pb 168,445Zn .....Fe	
Zinc and lead-zinc ores	2,972,894	448,997	28,790	Pb 22,224 Zn 162,288
Miscellaneous	117,904	117,904	9,506	.....
Total	59,370,177	45,490,331	2,790,526	2,103,767

Potassium xanthate is a particularly interesting flotation reagent from the standpoint of the chemical industry, because it finds its only use in flotation, and furthermore because it came into prominence recently by displacing ortho-toluidine as a flotation reagent for a time, and seriously upset the market for ortho-toluidine. When potassium xanthate was discovered, it was almost universally used, and ortho-toluidine, which had been heavily used up to that time, was suddenly dropped.

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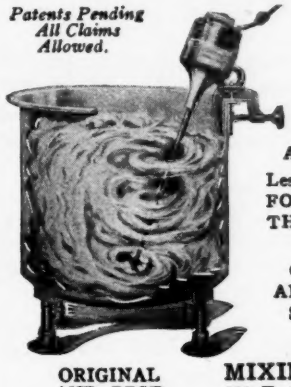

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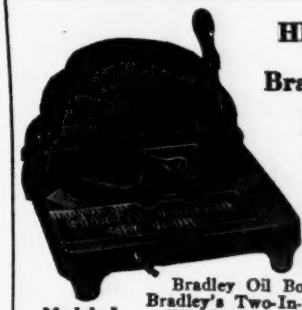

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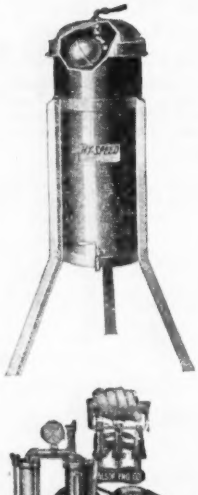

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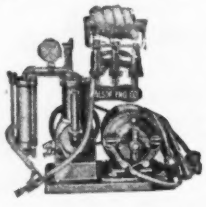

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CHEMICAL CHRONOLOGY FOR 1926

(Continued from page 45)

Dr. John E. Teeple is named recipient of Perkin Medal.
George Merck dies
McKesson & Robbins merge with Girard & Co.
Miers Busch named president of Pennsylvania Salt.

NOVEMBER.

Alkali makers close contracts for 1927 at slightly lower prices.
I. G. Farbenindustrie of Germany allies with Standard Oil Co. in granting to the American company the rights to the Bergin Process of manufacture of motor fuel from coal in exchange for the German rights to use of tetraethyl lead.
Sir William Alexander states that low temperature carbonization of coal is the foremost problem facing England's chemical industry.
Roscoe Brunner, of Brunner, Mond & Co., London, dies.
Lacquer production for first six months of 1926 shows increase of 62 per cent.
Sodium prussiate contracts advanced 1c per pound.
International Conference on Bituminous Coal held at Pittsburgh.
Ammonia market completely disorganized as prices for anhydrous break to 10c per pound.
Charles H. Herty resigns as president of Synthetic Organic Chemical Manufacturers Association to join Chemical Foundation.

DECEMBER

Secretary Hoover holds conference with chemical executives.
Henry Merz, of Heller & Merz Co., dies at 65 years.
August Merz, of Heller & Merz Co., is elected president of Synthetic Organic Chemical Manufacturers Association.
Thirty-six fertilizer manufacturers plead guilty to making agreement to lessen competition and are fined.
Dr. E. R. Weidlein, director of Mellon Institute, is elected president of American Institute of Chemical Engineers.
Dovan Chemical Corp. successfully defends patent rights to use of diphenylguanidine and all disubstituted guanidines as rubber accelerators.
Dr. George D. Rosengarten elected president of American Chemical Society.
R. R. Brown elected president of U. S. Industrial Alcohol Co., as stock is placed on $5 basis.
H. G. Stephenson, New York sales manager of dyestuffs for Du Pont Company, retires.
Imperial Chemical Industries and International Combustion Corp. reported in agreement on process for low temperature carbonization of coal in England.

About 50 per cent of the world's production of antimony finds its way into United States, and in times of peace 75 per cent of the imports are utilized in the manufacture of type metal, antifriction bearings for machinery, britannia metal, and hard metal. Of the 30 odd uses to which antimony is put, virtually all can be taken care of satisfactorily by substitutes, many of which are on a stronger industrial footing than antimony and its alloys; as an example, in the hardening of lead either calcium, barium, strontium, magnesium, or copper may be used. Antimony is used as a pigment and as a mordant, but many metals can be used in its place. Antimony does not seem to possess any characteristics that make it irreplaceable.

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CHEMICAL SALES and sales promotion. Young man, eight years' experience actual selling and inside mail sales promotion; charge advertising and correspondence; technically trained; available immediately. Box 566, CHEMICAL MARKETS.

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CHEMIST, Ph.D., organic, 15 years research, production and business experience; formerly Bureau of Standards; technical proficiency with understanding commercial aspects involved; references. Box 615, CHEMICAL MARKETS.

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SHIPPING CLERK familiar with packing of chemical products wanted to take charge of warehouse in Brooklyn. Box 506, CHEMICAL MARKETS.

WANTED—Assistant to Sales Director of large chemical and oil jobbers in Metropolitan District. Must have real initiative and executive ability. Excellent opportunity for right man. State age, experience, and salary expected. Communications treated confidential. Box 600, CHEMICAL MARKETS.

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WANTED—Salesman familiar with Soap Manufacturers trade to take a side line for importer. Box 613, CHEMICAL MARKETS.

RUBBER CHEMIST—Manufacturer requires service of technical man with practical plant experience. Box 505, CHEMICAL MARKETS

CHICAGO CHEMICAL and color house seeks salesman for middlewestern territory Must live in Chicago. State history, experience. Give all details possible; also salary expected. Box 585, CHEMICAL MARKETS.

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Local Market Conditions

LOS ANGELES

The chemical trade condition which had been good through most of the month of December slowed up during the holidays and during that period is characterized as only fair. There has been a brisk business done on alkalis on contracts over the current year. The most important price change of the period under review was an advance of ¼c lb in carbon tetrachloride. There was also considerable activity in tin oxide. Firmer tones were noted in alcohol and in sodium phosphate. Collections are rated as fair.

CHICAGO

Following the annual holiday quietness business is improving and can now be characterized as good. There is continued good demand for alcohol and glycerin in this district and there has also been a good movement in red oil and stearic acid. Otherwise there was no outstanding movement and no price change of note. Collections during the period have been good.

BOSTON

General business conditions in New England have been good since the first of the year. There have been several important advances in the chemical field, principal amongst these being amyl acetate, which is up 10c gal. and denatured alcohol which has advanced 2c gal. In spite of a 10c-100 lb decline in glauber salts there is considerable activity in this item and sizeable parcels are changing hands. Collections are good.

KANSAS CITY

The holiday season interrupted the usual movement of business but this year business did not slow up as is usually the case during December. In fact volume kept up very well until the day before Christmas. Despite efforts to advance the market on glycerin and alcohol there has been an easy undertone to the market and concessions in price are quite frequent. Sales are being made today at the open quotation price of the summer months. The advance in epsom salts has had very little effect,

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Local Market Conditions

due to the amount of contracts available at the old levels. Until the present stocks are cleaned up it is not likely that the advance will be felt generally. The position on acid phosphate is somewhat confusing with concessions being made and no particular schedule adhered to. Caustic soda has shown a large sale but each of the five makers are quoting different prices and it is difficult to quote a definite price. Although the feeling here is optimistic most buyers feel that business will not be quite up to 1926 and a conservative policy is noted. Collections are fair.

ST. LOUIS

As was expected, after the first of the year, shipments took a sudden spurt and buyers hastened to replenish stocks allowed to run down prior to inventory. Sellers are still taking contracts for deliveries over this year but buyers as a whole are reluctant to sign contracts without much deliberation. Prices generally have held firm although lead and zinc appear to be easing off. There is an optimistic tone to the market and the trade seems to be set for a prosperous year. Collections are slow, particularly in the South, although buying continues.

BUFFALO

General business conditions including chemicals in this territory are fair. There has been marked activity in denatured alcohol, acetone and solvents while turpentine and shellac were comparatively quiet. Chinawood oil which had been easy has stiffened considerably. Epsom salts showed a substantial increase in price. Otherwise the market was unchanged and in quite a good position for the new year. Collections were slower than is usually the case.

NEWARK

During the past four weeks there has been a good volume of chemicals moving in the Newark district. General conditions are excellent and a volume at least equal to the past sixty days is anticipated for the first two months of this year. No violent price changes

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Local Market Conditions

have occurred. Red arsenic has advanced 1/2c lb and cream of tartar is likewise up ¼c lb. White arsenic is quoted ¼c lb lower and citric acid has declined 1c lb. It is reported that alkali prices in carlots are being shaded below the markers carded prices and in the case where contracts have been renewed for 1927 special concessions have been made. Collections have been good probably due to the adjustment of financial statements prior to 1927.

CLEVELAND

Due to the inventory period business in general and particularly the chemical business in Cleveland has been at a standstill. Linseed oil shows concessions in price and during the early part of January the demand was very quiet and there were no inquiries of any consequence. Lately the inquiry has been better and quite some business has been done for June delivery. Glycerine has been firm throughout December at 30c gal. The demand which was fairly strong early in December has fallen off to some extent. Alcohol experienced the usual seasonal demand for radiator purposes but the volume was not particularly impressive. However there was a tendency on the part of some large buyers to contract for alcohol over the first six months of this year. Although business in the district has been dull, the general opinion is that this will be a good year.

PHILADELPHIA

Since the opening of the new year chemical business has been good and more contracts are being received from new sources as the month progresses. Castor oil in particular is showing strength and the market is well maintained at the scheduled level. Strength is also noted in formaldehyde, barium nitrate and strontium nitrate. Alums are not sharing in the general good inquiry due to the present quietness of the leather trade. In summary the market situation is firm and the outlook for the future is bright.

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New England	225	169	91	96	38	4	127	87	35	38	353	100	116	1,479
Atlantic	615	549	258	252	127	145	148	124	102	134	336	239	226	3,255
Southeastern	158	127	572	31	248	3	7	6	5	13	178	18	38	1,404
Central	586	445	134	293	94	81	134	120	105	73	113	131	194	2,503
Southwestern	46	44	88	13	93	19	5	—	7	1	5	8	29	358
Western	11	37	31	22	24	4	3	3	7	—	1	100	19	262
Pacific	52	64	52	37	39	5	11	12	12	12	16	17	61	390
Total	1,693	1,435	1,226	744	663	261	435	352	273	271	1,002	613	683	9,651

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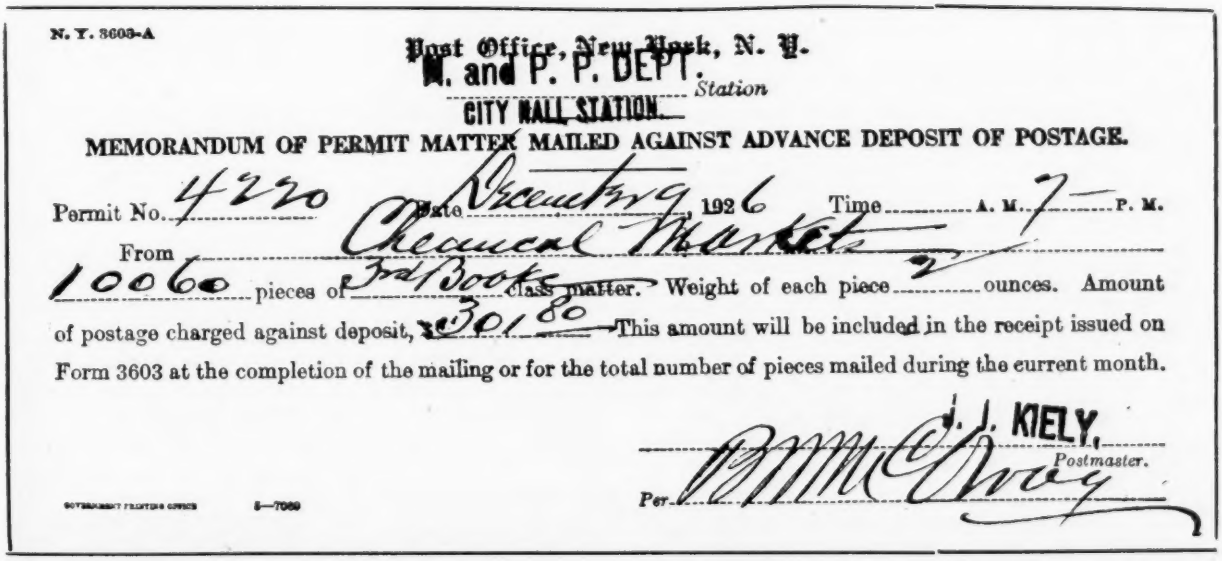

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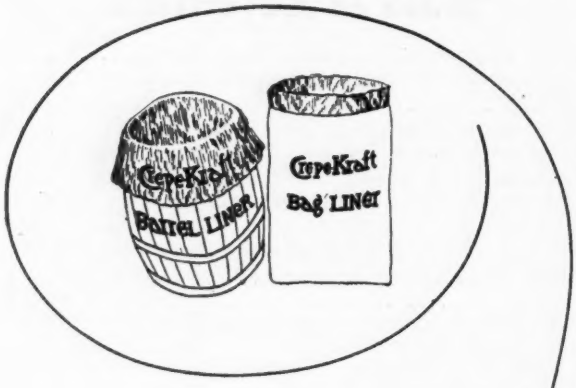

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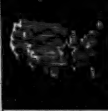
St L	$4.05	$1.45		$7.80
San F	$11.30	$8.25	$7.80	

BY THE RECENT READJUSTMENT in long distance rates, it is calculated that telephone users will save $3,000,000 annually. Interstate and intersectional rates are substantially lower. The greater the distance, the greater the reduction. Here are typical station-to-station day rates, old and new: New York to Pittsburgh, formerly $2.10; now $1.70. Chicago to Boston, $5.45—$3.95. Atlanta to San Francisco, $13.65—$9.40.

IN ADDITION TO THESE nation-wide rate changes, several new service conveniences are offered. The privilege of "reversing the charges," for example, formerly applied only to person-to-person calls. This has now been extended to include station-to-station calls —a substantial saving and a real convenience to thousands of business men.

Those who wish to take advantage of the lowest long distance rates of the twenty-four hours may now do so beginning at 8:30 P. M. From this hour to 4:30 A. M., station-to-station rates are about fifty per cent of day rates. Now, more than ever, long distance calls are useful in the development of business. Thousands now use the telephone nationally. By telephone you can make a week's trip in a few minutes. Is there a distant call that would clear up some troublesome transaction? It probably would cost less than you think. . . . *Number, please?*

BELL LONG DISTANCE SERVICE

UNFAIR COMPETITION, EMBRACING ALL ACTS CHARACTERIZED BY BAD FAITH, DECEPTION, FRAUD, OR OPPRESSION, INCLUDING COMMERCIAL BRIBERY, IS WASTEFUL, DESPICABLE, AND A PUBLIC WRONG. BUSINESS WILL RELY FOR ITS SUCCESS ON THE EXCELLENCE OF ITS OWN SERVICE.*

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* *No. 11. A series based on the conception of the U. S. Chamber of Commerce "Principles of Business Conduct". Reprinted in the interest of keeping American business on a sound and wholesome basis.*

AS a matter of policy, R & H has always operated on the principle that a straight line—in business as elsewhere—is the shortest distance between two points.

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